



**US Army Corps
of Engineers**

Kansas City District
You Matter - We Care

Demolition of USDB Castle Fort Leavenworth, Kansas

Construction Solicitation and Specifications

February 2004

DEPARTMENT OF THE ARMY
 Kansas City District, Corps of Engineers
 757 Federal Building
 Kansas City, Missouri 64106

SPECIFICATIONS FOR CONSTRUCTION OF
 DEMOLITION OF USDB CASTLE
 FORT LEAVENWORTH, KANSAS

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SOLICITATION, OFFER, AND AWARD (Construction, Alteration, or Repair)		1. SOLICITATION NO.	2. TYPE OF SOLICITATION	3. DATE ISSUED	PAGE OF	PAGES
		W912DQ-04-R-0004	<input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	2/2/2004	1	186
IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.						
4.		5. REQUISITION/PURCHASE REQUEST NO.		6. PROJECT NO.		
7. ISSUED BY		CODE	8. ADDRESS OFFER TO			
U.S. Army Engineer District, Kansas City 760 Federal Building, 601 E. 12th Street Kansas City, Missouri 64106-2896 Tel: (816) 983-3845 Fax: (816) 426-5169			See Item 7 Bid Opening Room: 748			
9. FOR INFORMATION CALL:	A. NAME Alice Jeffres		B. TELEPHONE NO. (Include area code) 816-983-3831 Ext. (NO COLLECT CALLS)			

SOLICITATION

NOTE: In sealed bid solicitation "offer" and "offeror" mean "bid" and "Bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS (Title, identifying no., date):

Demolition of USDB Castle Fort Leavenworth, Kansas

The primary effort of this project is to demolish the main USDB structure known as the Castle. The Castle consists of a central rotunda, eight wings and two kitchen areas. The demolition will also include foundation structures in their entirety and restoration of the site to the natural state. The demolition also includes remediation of hazardous materials (asbestos) and worker protection for materials containing lead based paint. The project also contains minor construction work necessary to rerout supporting utility systems in order to keep the remaining structures operable during demolition operations.

EACH OFFEROR IS STRONGLY ENCOURAGED TO CAREFULLY REVIEW THE CAUTION! PAGE OF THE SOLICITATION.

Award to be made pursuant to the Small Business Competitiveness Demonstration Program.

11. The Contractor shall begin performance within <u>10</u> calendar days and complete it within <u>360</u> calendar days after receiving <input type="checkbox"/> award <input checked="" type="checkbox"/> notice to proceed. This performance period is <input checked="" type="checkbox"/> mandatory, <input type="checkbox"/> negotiable. (See 52.211-10)	
12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (If "YES", indicate within how many calendar days after award in Item 12B.) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	12B. CALENDAR DAYS 10
13. ADDITIONAL SOLICITATION REQUIREMENTS:	
A. Sealed offers in original and <u>one</u> copies to perform the work required are due at the place specified in Item 8 by <u>3:00 PM</u> local time <u>3/4/2004</u> (date). If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.	
B. An offer guarantee <input checked="" type="checkbox"/> is, <input type="checkbox"/> is not required. NOT TO EXCEED <u>20%</u> OF TOTAL BID AMOUNT	
C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.	
D. Offers providing less than <u>120</u> calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.	

OFFER (Must be fully completed by offeror)

W912DQ-04-R-0004

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)	15. TELEPHONE NO. (Include area code)
	(FAX #)
	16. REMITTANCE ADDRESS (Include only if different from Item 14)
DUNS NO:	
CODE	FACILITY CODE

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within 120 calendar days after the date offers are due. (Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)

AMOUNTS: See attached Bidding Schedule

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGEMENT OF AMENDMENTS

(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each)

AMENDMENT NO.								
DATE								

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	20B. SIGNATURE	20C. OFFER DATE
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AWARD (To be completed by Government)

21. ITEMS ACCEPTED

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA	
24. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO
26. ADMINISTERED BY	CODE	<input type="checkbox"/> 10 U.S.C. 2304(c) () <input type="checkbox"/> 41 U.S.C. 253(c) ()
		27. PAYMENT WILL BE MADE BY

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

<input type="checkbox"/> 28. NEGOTIATED AGREEMENT (Contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.	<input type="checkbox"/> 29. AWARD (Contractor is not required to sign this document) Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.	
30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type of print)	31A. NAME OF CONTRACTING OFFICER (Type or print)	
30B. SIGNATURE	31b. UNITED STATES OF AMERICA	31C. AWARD DATE

STANDARD FORM 1442 BACK (REV. 4-85)

Section 00010 - Solicitation Contract Form

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Demolition of USDB Castle FFP The Contractor shall demolish entire structure including foundations and utility tunnels and remove all materials and debris from the installation and return the site to a natural state as depicted on the contract drawings. The Contractor shall have salvage rights to any and all materials generated by this demolition work. PURCHASE REQUEST NUMBER: W58XUW-3336-3410	1	Lump Sum		

 NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002	OPTION 1 - Salvage FFP Contractor shall salvage 2,800,000 whole usable bricks. The contractor shall clean, stack, palletize, band together and deliver the bricks to a Government Warehouse within 20 miles of Ft. Leavenworth, Kansas. The Contractor shall retain salvage rights to all remaining debris from the Demolition of the USDB Castle and remove it from the installation. At the option of the government, this optional line item may be exercised within _____ (offeror complete) calendar days after issuance of notice to proceed (minimum of 30).	1	Lump Sum		

 NET AMT

FOB: Destination

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NWK-00010-001 FIELD OFFICE OVERHEAD (JUL 2002)

NOTICE TO BIDDERS: For your bid to be responsive, you must declare below the single accounting practice that you apply to contracts to calculate field office overhead for all change orders, modifications and requests for equitable adjustment. Pursuant to Federal Acquisition Regulations (FAR) Parts 31.105(d)(3) and 31.203(d)(1), an accounting practice that varies from modification to modification is not allowable. Select one of the following:

1. TIME DISTRIBUTION BASE FOR A PER DIEM RATE

If you use this practice, see Special Clause "Field Office
Overhead Per Diem Rate" _____

2. DIRECT COST DISTRIBUTION BASE FOR A PERCENTAGE MARKUP

If you use this practice, see Special Clause "Field Office
Overhead Percentage Markup" _____

3. OTHER ACCOUNTING PRACTICE THAT IS ALLOWABLE

UNDER THE FAR AND THAT USES A SINGLE DISTRIBUTION BASE. _____

If you choose 3, you must describe the accounting practice in sufficient detail below to allow the contracting officer to determine what accounting practice is being utilized by your company and that it complies with the FAR.

FAILURE TO FULLY COMPLY WITH THE ABOVE REQUIREMENT OR, IF ALTERNATIVE 3 IS DECLARED AND YOUR DESCRIPTION DOES NOT CLEARLY STATE OR DESCRIBE A CONSISTENT ACCOUNTING PRACTICE USING A SINGLE DISTRIBUTION BASE, WILL BE CAUSE FOR YOUR BID TO BE REJECTED AS NON-RESPONSIVE.

NWK POC

CONTRACT SPECIALIST: Alice Jeffres PHONE: 816-983-3831 E-MAIL: Alice.M.Jeffres@usace.army.mil

PROJECT

MANAGER: Dave Werner PHONE: 816-983-3265 E-MAIL: David.E.Werner@usace.army.mil

NOTES:

- (1) **Price evaluation will be based on the offeror's proposed price for the BASE SCHEDULE (CLIN 0001). Immediate award will be made of the BASE SCHEDULE.** At the option of the Government, the OPTION SCHEDULE may be awarded at the proposal price after Notice of Award for the BASE SCHEDULE work. The Government does not guarantee any work beyond that of the BASE SCHEDULE. The Government reserves the right to pick up the OPTION SCHEDULE at the proposal price within **the number of** calendar days identified in the bid schedule by the offeror, after issuance of the Notice to Proceed. Offeror's attention is directed to SECTION 00100, paragraph titled "Evaluation of Options", for further details.
- (2) Proposal prices must be entered for all items of the Proposal Schedule. Award will be made as a whole to one Contractor on the basis of price and other factors. Offeror's attention is directed to SECTION 00110 PROPOSAL EVALUATION, SUBMISSION REQUIREMENTS, AND INSTRUCTIONS for further details.
- (3) If a modification to an offer is submitted which provides for a lump sum adjustment to the total cost, the application of the lump sum adjustment to each price in the Proposal Schedule must be stated. If it is not stated, the offeror agrees that the lump sum adjustment shall be applied on a pro rata basis to every price in the Proposal Schedule.
- (4) Offeror's attention is directed to SECTION 00100 paragraph titled "Arithmetic Discrepancies" wherein are procedures for correction of errors.
- (5) Offeror's attention is directed to SECTION 01100: GENERAL for special provisions pertaining to this Solicitation.
- (6) Offeror's attention is directed to SECTION 01100, paragraph titled " Kansas Sales and Use Tax".
- (7) The general outline of the principal features of each item as listed does not in any way limit the responsibility of the offeror for making a thorough investigation of the drawings and specifications to determine the scope of work included in each item.
- (8) Offeror's attention is directed to the CONTRACT CLAUSES wherein the apparent low offeror is required to submit a small business and small disadvantaged business subcontracting plan. The subcontracting plan shall be submitted in the format that appears at the end of SECTION 00600. Submission of the plan is required prior to award. Award will not be made under this solicitation before the Contracting Officer approves the plan.
- (9) Offeror's attention is directed to the CONTRACT CLAUSES, FAR 52.223-9, Certification and Estimate of Percentage of Recovered Material Content for EPA-Designated Items. Certification will be required upon contract completion unless the Contracting Officer has approved a waiver. The waiver must be approved prior to contract award.
- (10) The Government will procure this facility through a Lowest Price Technically Acceptable competitive acquisition in accordance with the provisions set forth in the Request for Proposal (RFP).

CAUTION!

BEFORE SIGNING AND MAILING THIS PROPOSAL, please take note of the following, as failure to perform any one of these actions may cause your offer to be rejected.

1. AMENDMENTS: Have you acknowledged receipt of ALL Amendments? If in doubt as to number of amendments issued, please contact our office.
2. SEALED PROPOSALS: Sealed envelopes containing proposals shall be marked to show the offeror's name and address, the solicitation number, amendments received, and the date and time proposals are due.
3. AMENDED PROPOSAL PAGES: If any of the Amendments furnished amended proposal pages, the amended proposal pages must be used in submitting your proposal.
4. LATE PROPOSALS: In order for a late mailed proposal to be considered, generally it must have been sent by either registered or certified mail not later than 5 calendar days before the receipt of proposals date.
5. PROPOSAL GUARANTEE: Sufficient proposal guarantee in proper form must be furnished with your proposal, if your proposal exceeds \$50,000.
6. MISTAKE IN PROPOSAL: Have you reviewed your proposal prices for possible errors in calculations or work left out?
7. TELEGRAPHIC MODIFICATIONS: If you modify your proposal by telegram, be sure to allow sufficient time for the telegram to reach us prior to the time set for receipt of proposals. Any doubt should be resolved in favor of allowing Extra Time.
8. FACSIMILE PROPOSALS OR MODIFICATIONS: Will not be considered. Facsimile withdrawals will be considered.
9. SECTION 00600: Certifications must be completed and submitted with your proposal. Small Business and Small Disadvantaged Business Subcontracting Plan, found at the end of Section 00600, must be submitted prior to award.
10. HAND-DELIVERED PROPOSAL: If proposals are hand-delivered, you must be aware of security requirements in effect in the Federal Building. No additional time will be allowed due to security requirements.
11. BUY AMERICAN ACT: All offerors are cautioned that, prior Government conduct notwithstanding, the Contractor's selection of a domestic construction material (as defined in SECTION 00700) which would require the subsequent selection of a foreign construction material for compatibility is not a justification for waiver of the Buy American Act. It is the Contractor's responsibility to verify, prior to submitting the materials for approval, that each system can be built to meet the contract specifications without the use of foreign construction materials.
12. BONDS – Matter of All Seasons Construction, Inc. GAO Decision B-291166.2
Bid Bonds must be accompanied by a Power of Attorney containing an original signature from the surety, which must be affixed to the Power of Attorney after the Power of Attorney has been generated. Computer generated and signed Power's of Attorney will only be accepted if accompanied by an original certification from a current officer of the surety attesting to its authenticity and continuing validity.

Section 00100 - Bidding Schedule/Instructions to Bidders

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52.204-6	Data Universal Numbering System (DUNS) Number	OCT 2003
52.211-2	Availability of Specifications Listed in the DoD Index of Specifications and Standards (DODISS) and Descriptions Listed in the Acquisition Management Systems and Data Requirements Control List, DOD 5010.12-L	DEC 1999
52.214-34	Submission Of Offers In The English Language	APR 1991
52.214-5000	ARITHMETIC DISCREPANCIES	SEP 2000
52.215-1	Instructions to Offerors--Competitive Acquisition	MAY 2001
52.215-20	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data	OCT 1997
52.216-1	Type Of Contract	APR 1984
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52.232-38	Submission of Electronic Funds Transfer Information with Offer	MAY 1999
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52.236-27	Site Visit (Construction)	FEB 1995
52.236-28	Preparation of Proposals--Construction	OCT 1997
252.204-7001	Commercial And Government Entity (CAGE) Code Reporting	AUG 1999
252.204-7004 Alt A	Required Central Contractor Registration Alternate A	NOV 2003
NWK-00100-001	FIELD OFFICE OVERHEAD PERCENTAGE MARKUP	JUN 2000
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NWK-00100-003	BID BOND REQUIREMENTS	JUL 2002
NWK-00100-005	Magnitude of project	JUL 2002

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52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (OCT 2003)

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS+4" followed by the DUNS number or "DUNS+4" that identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet, Inc. The DUNS+4 is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the offeror to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11) for the same parent concern.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number--

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at <http://www.dnb.com>; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business name.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company physical street address, city, state and Zip Code.

(iv) Company mailing address, city, state and Zip Code (if separate from physical).

(v) Company telephone number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(End of provision)

52.211-2 AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L (DEC 1999)

Copies of specifications, standards, and data item descriptions cited in this solicitation may be obtained--

(a) From the ASSIST database via the Internet at <http://assist.daps.mil>; or

(b) By submitting a request to the--Department of Defense Single Stock Point (DoDSSP), Building 4, Section D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697-2667/2179, Facsimile (215) 697-1462.

(End of provision)

52.214-34 SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE (APR 1991)

Offers submitted in response to this solicitation shall be in the English language. Offers received in other than English shall be rejected.

(End of provision)

52.214-5000 ARITHMETIC DISCREPANCIES (MAR 1995)

- (a) For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the bidding schedule as submitted by the bidder:
 - (1) Obviously misplaced decimal points will be corrected;
 - (2) Discrepancy between unit price and extended price, the unit price will govern;
 - (3) Apparent errors in extension of unit prices will be corrected;
 - (4) Apparent errors in addition of lump-sum and extended prices will be corrected.
- (b) For the purpose of bid evaluation, the Government will proceed on the assumption that the bidder intends his bid to be evaluated on the basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.
- (c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

(End of Statement)

52.215-1 INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (MAY 2001)

(a) Definitions. As used in this provision--

“Discussions” are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer's discretion, result in the offeror being allowed to revise its proposal.

“In writing or written” means any worded or numbered expression which can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

“Proposal modification” is a change made to a proposal before the solicitation's closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

“Proposal revision” is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

“Time”, if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) Amendments to solicitations. If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) Submission, modification, revision, and withdrawal of proposals. (1) Unless other methods (e.g., electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted in paper media in sealed envelopes or packages (i) addressed to the office specified in the solicitation, and (ii) showing the time and date specified for receipt, the solicitation number, and the name and address of the offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show--

(i) The solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the offeror (and electronic address if available);

(iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;

(iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the offeror's behalf with the Government in connection with this solicitation; and

(v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

(3) Submission, modification, or revision, of proposals.

(i) Offerors are responsible for submitting proposals, and any modifications, or revisions, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that proposal or revision is due.

(ii)(A) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(1) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or

(2) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(3) It is the only proposal received.

(B) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(iii) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(iv) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(v) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an offeror or an authorized

representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(4) Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.

(5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

(6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

(7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

(8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

(d) Offer expiration date. Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).

(e) Restriction on disclosure and use of data. Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall--

(1) Mark the title page with the following legend: This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with-- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]; and

(2) Mark each sheet of data it wishes to restrict with the following legend: Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.

(f) Contract award. (1) The Government intends to award a contract or contracts resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation.

(2) The Government may reject any or all proposals if such action is in the Government's interest.

(3) The Government may waive informalities and minor irregularities in proposals received.

(4) The Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

(5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the

proposal.

(6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.

(7) Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.

(8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

(9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.

(10) A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.

(11) The Government may disclose the following information in postaward debriefings to other offerors:

- (i) The overall evaluated cost or price and technical rating of the successful offeror;
- (ii) The overall ranking of all offerors, when any ranking was developed by the agency during source selection;
- (iii) A summary of the rationale for award; and
- (iv) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.

(End of provision)

52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Commercial item exception. For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g.,

wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities;

(B) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market;

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the offeror is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The offeror shall prepare and submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(End of provision)

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a FIRM FIXED PRICE contract resulting from this solicitation.

(End of clause)

52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999)

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade
10%	6.9%

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

- (1) Name, address, and telephone number of the subcontractor;
- (2) Employer's identification number of the subcontractor;
- (3) Estimated dollar amount of the subcontract;
- (4) Estimated starting and completion dates of the subcontract; and
- (5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is

Ft Leavenworth, Kansas, Leavenworth County

(End of provision)

52.228-1 BID GUARANTEE (SEP 1996)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.-

(c) The amount of the bid guarantee shall be **TWENTY (20)** percent of the bid price or **THREE MILLION (\$3,000,000)**, whichever is less.-

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.-

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of clause)

52.232-18 AVAILABILITY OF FUNDS (APR 1984)

Funds are not presently available for this contract. The Government's obligation under this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the Contracting Officer for this contract and until the Contractor receives notice of such availability, to be confirmed in writing by the Contracting Officer.

(End of clause)

52.232-38 SUBMISSION OF ELECTRONIC FUNDS TRANSFER INFORMATION WITH OFFER (MAY 1999)

The offeror shall provide, with its offer, the following information that is required to make payment by electronic funds transfer (EFT) under any contract that results from this solicitation. This submission satisfies the requirement to provide EFT information under paragraphs (b)(1) and (j) of the clause at 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration.

- (1) The solicitation number (or other procurement identification number).
- (2) The offeror's name and remittance address, as stated in the offer.
- (3) The signature (manual or electronic, as appropriate), title, and telephone number of the offeror's official authorized to provide this information.
- (4) The name, address, and 9-digit Routing Transit Number of the offeror's financial agent.
- (5) The offeror's account number and the type of account (checking, savings, or lockbox).
- (6) If applicable, the Fedwire Transfer System telegraphic abbreviation of the offeror's financial agent.
- (7) If applicable, the offeror shall also provide the name, address, telegraphic abbreviation, and 9-digit Routing Transit Number of the correspondent financial institution receiving the wire transfer payment if the offeror's financial agent is not directly on-line to the Fedwire and, therefore, not the receiver of the wire transfer payment.

(End of provision)

52.233-2 SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from:

US Army Corps of Engineers
Kansas City District
760 Federal Building
601 E 12th Street
Kansas City, MO 64106-2896

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) Site visit will be 18 February 2004 at 10:00 am, point of contact is:

Name: Doug Sundblom
Address: Ft. Leavenworth Area Office
750 W Warehouse Road, Bldg #234
Ft. Leavenworth, KS 66027-3387
Telephone: 913-684-5070

For security reasons it is requested that all contractors call and get their name on the site visit list of attendees.

(End of provision)

52.236-28 PREPARATION OF PROPOSALS--CONSTRUCTION (OCT 1997)

(a) Proposals must be (1) submitted on the forms furnished by the Government or on copies of those forms, and (2) manually signed. The person signing a proposal must initial each erasure or change appearing on any proposal form.

(b) The proposal form may require offerors to submit proposed prices for one or more items on various bases, including--

(1) Lump sum price;

(2) Alternate prices;

(3) Units of construction; or

(4) Any combination of paragraphs (b)(1) through (b)(3) of this provision.

(c) If the solicitation requires submission of a proposal on all items, failure to do so may result in the proposal being rejected without further consideration. If a proposal on all items is not required, offerors should insert the words "no proposal" in the space provided for any item on which no price is submitted.

(d) Alternate proposals will not be considered unless this solicitation authorizes their submission.

(End of provision)

252.204-7001 COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (AUG 1999)

(a) The offeror is requested to enter its CAGE code on its offer in the block with its name and address. The CAGE code entered must be for that name and address. Enter "CAGE" before the number.

(b) If the offeror does not have a CAGE code, it may ask the Contracting Officer to request one from the Defense Logistics Information Service (DLIS). The Contracting Officer will--

(1) Ask the Contractor to complete section B of a DD Form 2051, Request for Assignment of a Commercial and Government Entity (CAGE) Code;

(2) Complete section A and forward the form to DLIS; and

(3) Notify the Contractor of its assigned CAGE code.

(c) Do not delay submission of the offer pending receipt of a CAGE code.

(End of provision)

252.204-7004 REQUIRED CENTRAL CONTRACTOR REGISTRATION ALTERNATE A (NOV 2003)

(a) Definitions. As used in this clause--

"Central Contractor Registration (CCR) database" means the primary Government repository for contractor information required for the conduct of business with the Government.

"Commercial and Government Entity (CAGE) code" means--

(1) A code assigned by the Defense Logistics Information Service (DLIS) to identify a commercial or Government entity; or

(2) A code assigned by a member of the North Atlantic Treaty Organization that DLIS records and maintains in the CAGE master file. This type of code is known as an "NCAGE code."

"Data Universal Numbering System (DUNS) number" means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

"Data Universal Numbering System +4 (DUNS+4) number" means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR

records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11 of the Federal Acquisition Regulation) for the same parent concern.

“Registered in the CCR database” means that--

(1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, into the CCR database;

(2) The Contractor's CAGE code is in the CCR database; and

(3) The Government has validated all mandatory data fields and has marked the records “Active.”

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “DUNS” or “DUNS +4” followed by the DUNS or DUNS +4 number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number--

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at <http://www.dnb.com>; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company Physical Street Address, City, State, and Zip Code.

(iv) Company Mailing Address, City, State and Zip Code (if separate from physical).

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) The Contractor is responsible for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(g)(1)(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12 of the FAR; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (g)(1)(i) of this clause, or fails to perform the agreement at paragraph (g)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see FAR Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(h) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423, or 269-961-5757.

(End of clause)

NWK-00100-001

FIELD OFFICE OVERHEAD PERCENTAGE MARKUP

If any change to the contract, issued pursuant to the changes Clause or otherwise, for which the Government is responsible, causes an increase or decrease in the Contractor's cost of, of the time required for, performance under the contract, the Contracting Officer shall make an equitable adjustment and modify the contract in writing.

Under such equitable adjustment, no per diem rate for field office overhead shall be allowed if the Contractor has elected a percentage markup in keeping with its standard accounting practices. In such a case, payment of field office overhead shall be allowed for any change on a percentage markup basis regardless of whether the completion of the contract is or is not extended by reason of the change, except for modifications issued pursuant to the Default Clause. The Contractor shall provide a detailed breakdown of its proposed increase or decrease of

costs as required by Contract Clause DFARS 252.236-7001 MODIFICATION OF PROPOSALS – PRICE BREAKDOWN.

NWK-00100-002 FIELD OFFICE OVERHEAD PER DIEM RATE

If any change to the contract, issued pursuant to the Changes Clause or otherwise, for which the Government is responsible, causes an increase or decrease in the Contractor's cost of, or the time required for, performance under the contract, the Contracting Officer shall make an equitable adjustment and modify the contract in writing.

Under such equitable adjustment, no payment of field office overhead shall be allowed for any changes when the completion of the contract is not extended by reason of the change, except the Contractor may be reimbursed any variable expense it incurs due to the change, provided it can substantiate the variables. The Contractor shall be reimbursed for field office overhead on a per diem basis when the completion of the contract is extended by reason of the change issued under any clause except the Default clause. Equitable adjustment shall be made for the costs that are incurred or are to be incurred due to the change. The Contractor shall provide a detailed breakdown of its proposed increase or decrease of costs as required by Contract Clause DFARS 252.236-7001 MODIFICATION OF PROPOSALS – PRICE BREAKDOWN.

NWK-00100-003 BID BOND REQUIREMENTS (DEC 1989) (FAR 28.101-2)

If your bid exceed \$50,000.00, the bid bond shall be in the amount of 20% of the bid price or \$3,000,000, whichever is the lesser amount. (See CONTRACT CLAUSE titled "Bid Guarantee.")

NWK-00100-001 MAGNITUDE OF PROJECT (FAR 36.204)

The magnitude of this project is represented by the following estimated price range:

BETWEEN \$5,000,000 AND \$10,000,000

SECTION 00110**PROPOSAL EVALUATION, SUBMISSION REQUIREMENTS AND INSTRUCTIONS****1.00 GENERAL PROPOSAL INFORMATION.**

General. Each offeror must submit a proposal in accordance with the requirements of this section. The selection of the contractor will utilize the "Lowest Price Technically Acceptable Source Selection Process" in accordance with FAR Part 15.101-2. The principal objective of this process is to select responsible offerors to be the overall the "Best Value" to the Government, price and other factors considered. The proposal should be prepared simply and economically, providing straightforward, concise delineation of capabilities to perform the contract. The proposal should be practical, legible, clear and coherent.

2.00 GENERAL PROPOSAL SUBMISSION INSTRUCTIONS AND EVALUATION PROCESS**a. Who May Submit.**

- (1) Any legally organized offeror may submit a proposal.

b. General Requirements.

- (2) All offerors shall be required to submit a proposal with the minimum content as specified herein. Proposals without the minimum content may be rejected. Proposals will be received until the date and time indicated on Standard form 1442 at the following address:

U.S. Army Engineer District, Kansas City
757 Federal Building
ATTN: CENWK-CT-M/Jeffres
601 East 12th Street
Kansas City, Missouri 64106-2896

c. Informal Source Selection Process

All offers received in response to this solicitation will be evaluated in accordance with informal source selection procedures. The Government reserves the right to consider and evaluate information regarding past performance from sources outside the proposal. The process is designed to ensure the impartial, equitable, and comprehensive evaluation of all technically acceptable, responsible proposals received in response to this particular solicitation.

- (1) Source Selection Organization

The source selection organization is established as a separate organization and management chain of command whose only purpose is to accomplish the objective above. The organization consists of a Source Selection Authority (SSA) and a Source Evaluation Board (SSEB). The SSEB is comprised of separate Technical Evaluation and Price Evaluation teams. The organization is designed to ensure active ongoing involvement of appropriate contracting, technical, logistics, legal, price analysis, and other functional staff management expertise.

- (2) Source Selection Procedure

- (a) The source selection procedures will begin with an initial review of proposals and continue with a technical and price evaluation conducted by the SSEB. The SSEB shall evaluate the proposals based solely on the evaluation criteria identified below in the paragraph Evaluation Factors. The results of the SSEB evaluations will

be presented to the SSA, who will rank the proposals based on the Best Value to the Government, price and other factors considered. The Government intends to award without discussions.

(b) The SSA shall then rank the proposals based on the Best Value to the Government. The lowest price will be the deciding factor once a proposal is considered technically acceptable.

(c) The proposals received in response to this RFP will be evaluated individually to determine technical acceptability. To be considered technically acceptable, each offeror shall specifically address each of the evaluation factors listed below. Sufficient detail shall be provided, citing specific data as may be required, such that the proposal may be adequately evaluated. The proposal must show clearly that the offeror has an understanding of the work tasks required and has the capability and responsibility to accomplish the work.

(d) The Government is not responsible for information overlooked during the evaluation which is not located in the appropriate proposal section. To ensure the evaluation credit is appropriately received for proposal material submitted, do not incorporate by reference documents not contained in the proposal. References to sections of the proposal shall be by specific paragraph number (and name, if applicable), page number and section.

3.00 BASIS FOR AWARD

The Government intends to select, without discussions, the responsible offeror whose proposal conforms to the solicitation and is determined to be the "Lowest price technically acceptable" Best Value to the Government in accordance with FAR Par 15.101-2.

4.00 PROPOSAL FORMAT AND SUBMITTAL REQUIREMENTS

a. In order to be considered for award of a contract for the requirements of this solicitation, the offeror must submit all requested information. Failure to submit a complete proposal will result in the entire offer being rejected. The proposal shall consist of 2 parts:

(1) TECHNICAL/MANAGEMENT PROPOSAL.

(2) PRICE PROPOSAL consists of the original signed Standard Form 1442 "solicitation, Offer, and Award"; providing a price for all line items in the bid schedule; and acknowledgment of all amendments to the solicitation.

b. Proposal Characteristics

(1) All text must be legible and easily read. The page size of the offeror's proposal shall not exceed 8-1/2 by 11 inches. Diagrams, charts and tables shall conform to the paper size. All text shall be typed single-spaced. Margins (1-inch) shall be clean and clear. If fold-out charts are unavoidable, and are to be utilized, all sheets shall be reproduced on 11 by 17 inch, and folded to 8-1/2 by 11 inch size with the title clearly visible at the bottom right corner. Volume I shall be contained within a 3-ring loose leaf binder and submitted in the following quantities (no heat or spiral bound volumes). Limit the technical/management portion of the proposal to a maximum of 100 pages (single sided).

VOLUME I – Technical/management proposal
VOLUME II – Price Proposal

Original & 6 copies
Original & 1 copy

(2) The Offeror's name, address, signature and telephone number shall appear on any document submitted to be evaluated. Each Volume of the proposal shall be identified by the Solicitation number, Volume number, name, address, and telephone number of the offeror on the cover page. Each Volume shall also contain a table of contents, list of tables, list of figures, list of appendices, list of acronyms and at the bottom left side of each page the volume number shall be included. The list of acronyms should include all acronyms appearing in that

volume. The cover page of each part shall be properly printed with: i) the solicitation number; ii) the project title - **"DEMOLITION OF USDB CASTLE, FORT LEAVENWORTH, KANSAS"**, iii) the name, address, and telephone number of the firm submitting the proposal, and the name of the firm's point of contact; and one of the following on each volume in bold letters:

VOLUME I: TECHNICAL/MANAGEMENT PROPOSAL

VOLUME II: PRICE PROPOSAL

(3) The Proposal's clarity, organization and cross referencing is mandatory. No material shall be incorporated by reference. General cross-references or cross referencing guides will not be considered appropriate cross-references.

(4) The Proposal shall be organized by factors and subfactors. They shall be described in separate sections, appropriately tabbed in a report form. All pages of each factor/subfactor shall be sequentially numbered. Elaborate or lengthy presentations are not necessary or desirable.

(5) The Technical/Management narrative shall be written in a way to demonstrate a clear understanding of the requirements, but should not parrot the specifications. The Technical/Management proposal shall not refer the reviewer to information contained in the Price proposal.

5.00 PART I - TECHNICAL /MANAGEMENT PROPOSAL SUBMISSION INSTRUCTIONS:

a. The Technical/Management proposal shall address the offeror's ability to fully perform the requirements of the RFP. Offerors are discouraged from providing information not required by the solicitation.

b. The offeror shall address each of the following Factors and Sub factors, in sufficient detail to permit a complete and comprehensive evaluation: The Offeror must submit a written statement certifying that all items of his proposal complies with the requirements of this solicitation. The compliance statement will be signed by the Offeror and provided with the contractual/financial information as required in paragraph 7.00.

c. Any deviation from the solicitation requirements may result in non-consideration of its proposal. If deviations are included, they must be clearly indicated in the Offeror's Statement of Compliance. After award, the solicitation requirements will govern in the event of a conflict between these requirements and the Offeror's proposal.

6.00 EVALUATION FACTORS AND SUBMISSION CRITERIA: All factors and subfactors listed below will be evaluated on a pass/fail basis. Once any factor is rated as failed or not in compliance with the solicitation the offeror will not be further evaluated or considered for price.

a. Factor 1 - Offeror's Experience – Similar Size and Scope. The demolition of the USDB Castle complex requires a bonafide demolition contractor with extensive experience in the demolition of large structures. The successful offer must have a licensed demolition supervisor on his staff and must be on site at all times while demolition operations are taking place (see evaluation Factor 3). The close proximity of existing inhabited structures will require the Contractor to maintain their operational integrity and protect them from damage during demolition of the USDB Castle. Each offer must submit a minimum of three (3) and may submit a maximum of (5) projects they have completed in the last 3 years that demonstrates compliance with the factors below for consideration. Each relevant example submitted must be over three (3) stories in height above ground and must be over 80,000 gross square feet and demonstrate that it was executed in an "urban setting" surrounded by other buildings that were required to remain operational and protected from collateral damage during the demolition. In addition, one of the examples must demonstrate experience in demolition of a multi-story building a minimum of six floors above ground and 400,000 gross square feet. The examples provided must demonstrate

the contractor is capable of demolition by mechanical means. Failure to provide complete information and/or failure to demonstrate compliance with all factors will eliminate the offeror from consideration in this solicitation. The Offeror must provide complete information for each example submitted for consideration as follows:

- Project scope (Gross square feet and height)
- Location (urban location, which city)
- Cost (Dollar value of the contract)
- Date of completion or percent (%) complete
- Solicitation number and contract type
- Owner references (names and telephone numbers).

Examples must be ongoing (at least 50% complete) or completed in the three (3) years period preceding the date of this solicitation.

b. Factor 2 - Offeror Past Performance Information: The Offeror will provide a “Past Performance Evaluation Questionnaire” to the point of contact for each of the project examples required in item 6.00(a). The project point of contact must complete the questionnaire and mail, fax, or email it directly to Ms. Alice M. Jeffres, Contract Specialist, at Alice.M.Jeffres@nwk02.usace.army.mil no later than the closing date on the RFP. The Offeror is responsible for ensuring that the completed questionnaires are provided by the closing date. The Offeror must receive an overall rating of average or above in response to the questionnaires before his proposal will be considered technically acceptable. An above average rating in another area of the question can be used to cancel a below average rating in another. However any response received that is rated as unsuccessful or highly dissatisfied will be considered technically unacceptable. A copy of the questionnaire is included at the end of paragraph 6.00.

c. Factor 3 - Project Management: The Offeror will provide a project management plan that addresses the following factors and factors below.

- **Organization Chart and Key Personnel Subfactor:** The Offeror must provide a project management-staffing plan. This plan will include an organizational chart indicating the positions of his key personnel, their primary duties and major subcontractor he plans to use on this project. The staffing plan must indicate whether the person is an employee, a subcontractor, or a consultant. The Offeror must provide a resume, indicating qualifications (relevant work experience) and level of authority, for the following key personnel: the Project Manager, QC Manager and the Job Superintendent. Each resume should reflect each individual’s involvement, if any, in the project examples provided above in factor 1. Each resume must list at least two professional references. The Government has a right to rereview the Contractor’s key personnel if they should change or be replaced for any reason once the contract has been awarded. The organizational chart must also indicate whether key personnel are full or part time, and the geographic location where they are currently based. The offer must provide a comprehensive organization chart which includes resumes for the key personnel listed above in order to be considered technically acceptable.
- **Demolition License Subfactor:** The project manager and/or project supervisor must have a current valid demolition license from a state or municipality in which the offeror resides or does business. The license must authorize the holder to demolish buildings over 3 stories in height. In order for the proposal to be technically acceptable, the offer must submit a copy, or other proof of possession of this license with his proposal.
- **Construction and Demolition Waste Management Plan Subfactor:** The Contractor shall take a proactive, responsible role in the management of construction waste. The Offer must provide a draft plan that

demonstrates how the Contractors will handle salvageable and unsalvageable materials as required by SECTION 01572, CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT of the RFP. The offeror must demonstrate an understanding of this requirement in order for his proposal to be considered technically acceptable.

**SAMPLE TRANSMITTAL LETTER
AND
PAST PERFORMANCE EVALUATION QUESTIONNAIRE
DEMOLITION OF USDB CASTLE**

Date: _____

To: _____

We have listed your firm as a reference for work we have performed for you as listed below. Our firm has submitted a proposal under a project advertised by the U.S. Army Corps of Engineers, Kansas City District. In accordance with Federal Acquisition Regulations (FAR), an evaluation of our firm's past performance will be completed by the Corps of Engineers. Your candid response to the attached questionnaire will assist the evaluation team in this process.

We understand that you have a busy schedule and your participation in this evaluation is greatly appreciated. Please complete the enclosed questionnaire as thoroughly as possible. Space is provided for comments. Understand that while the responses to this questionnaire may be released to the offeror, FAR 15.306 (e)(4) prohibits the release of the names of the persons providing the responses. Complete confidentiality will be maintained. Furthermore, a questionnaire has also been sent to _____ of your organization. Only one response from each office is required. If at all possible, we suggest that you individually answer this questionnaire and then coordinate your responses with that of _____, to forge a consensus on one overall response from your organization.

Please send your completed questionnaire to the following address:

U.S. Army Engineer District, Kansas City
ATTN: CENWK-CT-M/Jeffres
760 Federal Building
601 East 12th Street
Kansas City, Missouri 64106-2896

The questionnaires can also be e-mailed to Alice.M.Jeffres@nwk02.usace.army.mil or faxed to 816-426-5169.

If you have questions regarding the attached questionnaire, or require assistance, please contact Ms. Jeffres at (816) 983-3831.

PAST PERFORMANCE EVALUATION QUESTIONNAIRE

Upon completion of this form please send directly to the U.S. Army Corps of Engineers in the enclosed addressed envelope or fax to 815-426-5169, ATTN: Alice M. Jeffres. Do not return this form to our offices. Thank you.

1. Contractor/Name & Address (City and State):

2. Type of Contract: Fixed Price _____ Cost Reimbursement _____
Other (Specify) _____

3. Title of Project/Contract Number:

4. Description of Work: (Attach additional pages as necessary)

5. Complexity of Work: High _____ Mid _____ Routine _____

6. Location of Work: _____

7. Date of Award: _____

8. Status: Active _____ (provide percent complete)
Complete _____ (provide completion date)

9. Name, address and telephone number of the individual responsible for oversight of construction:

10. Provide the name, address and phone number of the person completing this evaluation survey if different from the person in paragraph 9 above.

QUALITY OF PRODUCT/SERVICE:

11. Evaluate the contractor's performance in complying with contract requirements, quality achieved and overall technical expertise demonstrated.

Excellent Quality	
Above Average Quality	
Average Quality	
Below Average Quality	
Unsuccessful or Experienced Significant Quality Problems	

Remarks: _____

12. Evaluate the Contractors Quality Control plan. To what extent was the contractor able to solve contract performance problems without extensive guidance from government/owner counterparts?

Excellent	
Above Average	
Average	
Below Average	
Unsuccessful	

Remarks: _____

13. How would you rate the performance of the Contractor's project manager, Job Superintendent, and Quality Control manager? How well did they manage and coordinate subcontractors, suppliers, and the labor force?

Excellent	
Above Average	
Average	
Below Average	
Unsuccessful	

Remarks:

CUSTOMER SATISFACTION:

14. Evaluate to what extent were the end users satisfied with:

	Quality?	Cost?	Schedule?
Exceptionally Satisfied			
Highly Satisfied			
Satisfied (denotes average)			
Somewhat Dissatisfied			
Highly Dissatisfied			

Remarks:

15. If given the opportunity, would you work with this contractor again?

Yes _____ No _____
(denotes average or better)

TIMELINESS OF PERFORMANCE:

16. Evaluate the contractor’s performance in executing the work including appropriate scheduling, phasing and closeout of the contract requirements. How well did the contractor execute and meet the project schedule?

Excellent	
Above Average	
Average (Completed on Schedule with Minor Delays Under Extenuating Circumstances)	
Below Average (Experienced Significant Delays without Justification)	

Remarks: _____

7.00 PART II - PRICE PROPOSAL & CONTRACTUAL/FINANCIAL PROPOSAL SUBMISSION INSTRUCTIONS

The Price proposal is rated separately from the technical proposal and will not receive any consideration if the proposal is not technically acceptable. The Price proposal will not be scored but will be evaluated subjectively. The price proposal section of the proposal shall refer directly to items of the proposal schedule and shall be identified as such. A Contract will be awarded to the lowest priced technically acceptable proposal.

a. Pro Forma requirements. This information should be submitted in an envelope labeled "Pro Forma Requirements." Provide original and (1) copy. This category consists of the following:

- 1) Representations and Certifications (Section 00600)
- 2) Proposal bonds (See FAR 52.228-1)
- 3) Completed Standard Form 1442.

b. Price Proposal Information. Offeror shall complete all portions of the Price Proposal Schedule and furnish in a separate envelope, one original and one (1) copy.

c. The following will be evaluated when considering price

- 1) Realism: The price must be compatible with the solicitation's scope and is neither excessive nor insufficient for the effort required by this RFP.
- 2) Completeness: All cost information required by the Request for Proposals (RFP) has been submitted.
- 3) The offeror's base schedule price must include all costs associated with the demolition of the USDB Castle in accordance with the plans and specification. The offeror's option schedule price must include only the difference between the price identified in the base schedule and the cost of the option schedule effort.

8.00. DEBRIEFING OFFERORS

In accordance with FAR 15.505 Preaward Debriefing of Offerors, and FAR 15.506 Postaward Debriefing of Offerors, the offer should be aware of the following.

The Offeror may request a preaward debriefing by submitting a written request for debriefing to the Contracting Officer within 3 days after receipt of the notice of exclusion from competition. Offerors will be provided with an opportunity to address any negative past performance information on which the offeror has not previously had such an opportunity.

If the offeror does not submit a timely request the offeror need not be given either a preaward or a postaward debriefing. Offerors are entitled to no more than one debriefing for each proposal.

--- End of Section --

Section 00600 - Representations & Certifications

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CLAUSES INCORPORATED BY FULL TEXT

52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that --

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to --

(i) Those prices,

(ii) The intention to submit an offer, or

(iii) The methods of factors used to calculate the prices offered:

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory --

(1) Is the person in the offeror's organization responsible for determining the prices offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision _____ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of clause)

52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this Certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989,--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and

submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(v) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(End of provision)

52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions.

“Common parent,” as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

“Taxpayer Identification Number (TIN),” as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

___ TIN:_____

___ TIN has been applied for.

___ TIN is not required because:

___ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

___ Offeror is an agency or instrumentality of a foreign government;

___ Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

___ Sole proprietorship;

___ Partnership;

___ Corporate entity (not tax-exempt);

___ Corporate entity (tax-exempt);

___ Government entity (Federal, State, or local);

___ Foreign government;

___ International organization per 26 CFR 1.6049-4;

___ Other _____

(f) Common parent.

___ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

___ Name and TIN of common parent:

Name _____

TIN _____

(End of provision)

52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)

(a) Definition. Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Representation. [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representations, of this solicitation.] The offeror represents that it () is a women-owned business concern.

(End of provision)

52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 2001)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that-

(i) The Offeror and/or any of its Principals-

(A) Are () are not () presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have () have not (), within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are () are not () presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.

(ii) The Offeror has () has not (), within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 2002) - ALTERNATE I (APR 2002)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 238910.

(2) The small business size standard is \$12,000,000.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it () is, () is not a small business concern.

(2) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it () is, () is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a women-owned small business concern.

(4) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a veteran-owned small business concern.

(5) (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.) The offeror represents as part of its offer that it () is, () is not a service-disabled veteran-owned small business concern.

(6) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, as part of its offer, that--

(i) It () is, () is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It () is, () is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:_____.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(7) (Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.) The offeror shall check the category in which its ownership falls:

____ Black American.

____ Hispanic American.

____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

____ Individual/concern, other than one of the preceding.

(c) Definitions. As used in this provision--

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern," means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern," means a small business concern --

(1) That is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; or

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

52.219-19 SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (OCT 2000)

(a) Definition.

"Emerging small business" as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the North American Industry Classification System (NAICS) code assigned to a contracting opportunity.

(b) [Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.] The Offeror ☐ is, ☐ is not an emerging small business.

(c) (Complete only if the Offeror is a small business or an emerging small business, indicating its size range.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees Avg. Annual Gross Revenues

☐ 50 or fewer ☐ \$1 million or less

☐ 51 - 100 ☐ \$1,000,001 - \$2 million

☐ 101 - 250 ☐ \$2,000,001 - \$3.5 million

☐ 251 - 500 ☐ \$3,500,001 - \$5 million

☐ 501 - 750 ☐ \$5,000,001 - \$10 million

☐ 751 - 1,000 ☐ \$10,000,001 - \$17 million

☐ Over 1,000 ☐ Over \$17 million

(End of provision)

52.219-21 SMALL BUSINESS SIZE REPRESENTATION FOR TARGETED INDUSTRY CATEGORIES UNDER THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (MAY 1999)

(Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees Avg. Annual Gross Revenues

____ 50 or fewer ____ \$1 million or less

____ 51 - 100 ____ \$1,000,001 - \$2 million

____ 101 - 250 ____ \$2,000,001 - \$3.5 million

____ 251 - 500 ____ \$3,500,001 - \$5 million

____ 501 - 750 ____ \$5,000,001 - \$10 million

____ 751 - 1,000 ____ \$10,000,001 - \$17 million

____ Over 1,000 ____ Over \$17 million

(End of provision)

52.219-22 SMALL DISADVANTAGED BUSINESS STATUS (OCT 1999)

(a) General. This provision is used to assess an offeror's small disadvantaged business status for the purpose of obtaining a benefit on this solicitation. Status as a small business and status as a small disadvantaged business for general statistical purposes is covered by the provision at FAR 52.219-1, Small Business Program Representation.

(b) Representations.

(1) General. The offeror represents, as part of its offer, that it is a small business under the size standard applicable to this acquisition; and either--

____ (i) It has received certification by the Small Business Administration as a small disadvantaged business concern consistent with 13 CFR 124, Subpart B; and

(A) No material change in disadvantaged ownership and control has occurred since its certification;

(B) Where the concern is owned by one or more disadvantaged individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(C) It is identified, on the date of this representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration(PROONet); or

____ (ii) It has submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(2)___ For Joint Ventures. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements at 13 CFR 124.1002(f) and that the representation in paragraph (b)(1) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. [The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: _____.]

(c) Penalties and Remedies. Anyone who misrepresents any aspects of the disadvantaged status of a concern for the purposes of securing a contract or subcontract shall:

- (1) Be punished by imposition of a fine, imprisonment, or both;
- (2) Be subject to administrative remedies, including suspension and debarment; and
- (3) Be ineligible for participation in programs conducted under the authority of the Small Business Act.

(End of provision)

52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

- (a) () It has, () has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;
- (b) () It has, () has not, filed all required compliance reports; and
- (c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

52.222-25 AFFIRMATIVE ACTION COMPLIANCE (APR 1984)

The offeror represents that

- (a) [] it has developed and has on file, [] has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or
- (b) [] has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(End of provision)

52.223-4 RECOVERED MATERIAL CERTIFICATION (OCT 1997)

As required by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6962(c)(3)(A)(i)), the offeror certifies, by signing this offer, that the percentage of recovered materials to be used in the performance of the contract will be at least the amount required by the applicable contract specifications.

(End of provision)

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)

(a) Executive Order 13148, of April 21, 2000, Greening the Government through Leadership in Environmental Management, requires submission of this certification as a prerequisite for contract award.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (Check each block that is applicable.)

() (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed in 40 CFR 372.65;

() (ii) The facility does not have 10 or more full-time employees as specified in section 313.(b)(1)(A) of EPCRA 42 U.S.C. 11023(b)(1)(A);

() (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

() (iv) The facility does not fall within the following Standard Industrial Classification (SIC) codes or their corresponding North American Industry Classification System sectors:

(A) Major group code 10 (except 1011, 1081, and 1094.

(B) Major group code 12 (except 1241).

(C) Major group codes 20 through 39.

(D) Industry code 4911, 4931, or 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce).

(E) Industry code 4953 (limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C (42 U.S.C. 6921, et seq.), 5169, 5171, or 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis); or

() (v) The facility is not located within the United States or its outlying areas.

(End of clause)

52.226-2 HISTORICALLY BLACK COLLEGE OR UNIVERSITY AND MINORITY INSTITUTION REPRESENTATION (MAY 2001)

(a) Definitions. As used in this provision--

Historically black college or university means an institution determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. For the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, the term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

Minority institution means an institution of higher education meeting the requirements of Section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1067k, including a Hispanic-serving institution of higher education, as defined in Section 316(b)(1) of the Act (20 U.S.C. 1101a)).

(b) Representation. The offeror represents that it--

() is () is not a historically black college or university;

() is () is not a minority institution.

(End of provision)

252.209-7001 DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) "Definitions."

As used in this provision --

(a) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for such acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.

(3) "Significant interest" means --

(i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm, such as a director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

(iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding 50 percent or more of the indebtedness of a firm.

(b) "Prohibition on award."

In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary or, in the case of a subsidiary, the firm that owns the subsidiary, unless a waiver is granted by the Secretary of Defense.

(c) "Disclosure."

If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclose such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include --

(1) Identification of each government holding a significant interest; and

(2) A description of the significant interest held by each government.

(End of provision)

252.209-7002 DISCLOSURE OF OWNERSHIP OR CONTROL BY A FOREIGN GOVERNMENT (SEP 1994)

(a) Definitions. As used in this provision--

(1) "Entity controlled by a foreign government" means--

(i) Any domestic or foreign organization or corporation that is effectively owned or controlled by a foreign government; or

(ii) Any individual acting on behalf of a foreign government.

(2) "Effectively owned or controlled" means that a foreign government or any entity controlled by a foreign government has the power, either directly or indirectly, whether exercised or exercisable, to control or influence the election or appointment of the Offeror's officers, directors, partners, regents, trustees, or a majority of the Offeror's board of directors by means, e.g., ownership, contract, or operation of law.

(3) "Foreign government" means any governing body organized and existing under the laws of any country other than the United States and its possessions and trust territories and any agent or instrumentality of that government.

(4) "Proscribed information" means--

(i) Top Secret information;

(ii) Communications Security (COMSEC) information, except classified keys used to operate secure telephone unites (STU IIIs);

(iii) Restricted Data as defined in the U.S. Atomic Energy Act of 1954, as amended;

(iv) Special Access Program (SAP) information; or

(v) Sensitive Compartmental Information (SCI).

(b) Prohibition on award. No contract under a national security program may be awarded to a company owned by an entity controlled by a foreign government if that company requires access to proscribed information to perform the contract, unless the Secretary of Defense or designee has waived application of 10 U.S.C.2536(a).

(c) Disclosure.

The Offeror shall disclose any interest a foreign government has in the Offeror when that interest constitutes control by a foreign government as defined in this provision. If the Offeror is a subsidiary, it shall also disclose any reportable interest a foreign government has in any entity that owns or controls the subsidiary, including reportable interest concerning the Offeror's immediate parent, intermediate parents, and the ultimate parent. Use separate paper as needed, and provide the information in the following format:

Offeror's Point of Contact for Questions about Disclosure

(Name and Phone Number with Country Code, City Code and Area Code, as applicable)

Name and Address of Offeror

Name and Address of Entity
Controlled by a Foreign Government

Description of Interest, Ownership
Percentage, and Identification of
Foreign Government

(End of provision)

252.225-7031 SECONDARY ARAB BOYCOTT OF ISRAEL (APR 2003)

(a) Definitions. As used in this provision--

(1) Foreign person means any person (including any individual, partnership, corporation, or other form of association) other than a United States person.

(2) United States person is defined in 50 U.S.C. App. 2415(2) and means--

(i) Any United States resident or national (other than an individual resident outside the United States who is employed by other than a United States person);

(ii) Any domestic concern (including any permanent domestic establishment of any foreign concern); and

(iii) Any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern that is controlled in fact by such domestic concern.

(b) Certification. If the offeror is a foreign person, the offeror certifies, by submission of an offer, that it--

(1) Does not comply with the Secondary Arab Boycott of Israel; and

(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. 2407(a) prohibits a United States person from taking.

(End of provision)

252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it:

____ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

____ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

(End of provision)

Section 00700 - Contract Clauses

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CLAUSES INCORPORATED BY FULL TEXT

52.202-1 DEFINITIONS (MAY 2001) --ALTERNATE I (MAR 2001)

(a) Agency head or head of the agency means the Secretary (Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, unless otherwise indicated, including any deputy or assistant chief official of the executive agency.

(b) Commercial component means any component that is a commercial item.

(c) Component means any item supplied to the Government as part of an end item or of another component, except that for use in 52.225-9, and 52.225-11 see the definitions in 52.225-9(a) and 52.225-11(a).

(d) Contracting Officer means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(e) Nondevelopmental item means--

(1) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;

(2) Any item described in paragraph (f)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or

(3) Any item of supply being produced that does not meet the requirements of paragraph (f)(1) or (f)(2) solely because the item is not yet in use.

(f) "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(g) Except as otherwise provided in this contract, the term "subcontracts" includes, but is not limited to, purchase orders and changes and modifications to purchase orders under this contract.

(End of clause)

52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the

agency head or a designee determines that the Contractor, its agent, or another representative--

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) of this clause, the Government is entitled--

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

(End of clause)

52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1995)

(a) Except as provided in (b) of this clause, the Contractor shall not enter into any agreement with an actual or prospective subcontractor, nor otherwise act in any manner, which has or may have the effect of restricting sales by such subcontractors directly to the Government of any item or process (including computer software) made or furnished by the subcontractor under this contract or under any follow-on production contract.

(b) The prohibition in (a) of this clause does not preclude the Contractor from asserting rights that are otherwise authorized by law or regulation.

(c) The Contractor agrees to incorporate the substance of this clause, including this paragraph (c), in all subcontracts under this contract which exceed \$100,000.

52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from -

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold, from sums owed a subcontractor under the prime contract, the amount of any kickback. The Contracting Officer may order the monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including this subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$100,000.

52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the 1996 National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27(a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under

subsections 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

(End of clause)

52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27 (a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;

(3) For cost-plus-award-fee contracts--

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may--

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or

(ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUN 2003)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

- (1) The awarding of any Federal contract.
- (2) The making of any Federal grant.
- (3) The making of any Federal loan.
- (4) The entering into of any cooperative agreement.
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under Title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), Title 37, United States Code.
- (3) A special Government employee, as defined in section 202, Title 18, United States Code.
- (4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

State, as used in this clause, means a State of the United States, the District of Columbia, or an outlying area of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action.

Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

(1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--

(i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(e) Penalties.

(1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

(End of clause)

52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)

(a) Definitions. As used in this clause--

“Postconsumer material” means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of “recovered material.” For paper and paper products, postconsumer material means “postconsumer fiber” defined by the U.S. Environmental Protection Agency (EPA) as--

(1) Paper, paperboard, and fibrous materials from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; or

(2) All paper, paperboard, and fibrous materials that enter and are collected from municipal solid waste; but not

(3) Fiber derived from printers' over-runs, converters' scrap, and over-issue publications.

“Printed or copied double-sided” means printing or reproducing a document so that information is on both sides of a sheet of paper.

“Recovered material,” for paper and paper products, is defined by EPA in its Comprehensive Procurement Guideline as “recovered fiber” and means the following materials:

(1) Postconsumer fiber; and

(2) Manufacturing wastes such as--

(i) Dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into smaller rolls or rough sheets) including: envelope cuttings, bindery trimmings, and other paper and paperboard waste resulting from printing, cutting, forming, and other converting operations; bag, box, and carton manufacturing wastes; and butt rolls, mill wrappers, and rejected unused stock; and

(ii) Repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.

(b) In accordance with Section 101 of Executive Order 13101 of September 14, 1998, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, the Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed or copied double-sided on recycled paper that meet minimum content standards specified in Section 505 of Executive Order 13101, when not using electronic commerce methods to submit information or data to the Government.

(c) If the Contractor cannot purchase high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white wove envelopes, writing and office paper, book paper, cotton fiber paper, and cover stock meeting the 30 percent postconsumer material standard for use in submitting paper documents to the Government, it should use paper containing no less than 20 percent postconsumer material. This lesser standard should be used only when paper meeting the 30 percent postconsumer material standard is not obtainable at a reasonable price or does not meet reasonable performance standards.

(End of clause)

52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)

(a) The Government suspends or debar Contractors to protect the Government's interests. The Contractor shall not enter into any subcontract in excess of the \$25,000 with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.

(b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed \$25,000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principles, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(c) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs). The notice must include the following:

(1) The name of the subcontractor.

(2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

(End of clause)

52.215-2 AUDIT AND RECORDS--NEGOTIATION (JUN 1999)

(a) As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.

(b) Examination of costs. If this is a cost-reimbursement, incentive, time-and-materials, labor-hour, or price redeterminable contract, or any combination of these, the Contractor shall maintain and the Contracting Officer, or an authorized representative of the Contracting Officer, shall have the right to examine and audit all records and

other evidence sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this contract. This right of examination shall include inspection at all reasonable times of the Contractor's plants, or parts of them, engaged in performing the contract.

(c) Cost or pricing data. If the Contractor has been required to submit cost or pricing data in connection with any pricing action relating to this contract, the Contracting Officer, or an authorized representative of the Contracting Officer, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, shall have the right to examine and audit all of the Contractor's records, including computations and projections, related to--

- (1) The proposal for the contract, subcontract, or modification;
- (2) The discussions conducted on the proposal(s), including those related to negotiating;
- (3) Pricing of the contract, subcontract, or modification; or
- (4) Performance of the contract, subcontract or modification.

(d) Comptroller General--(1) The Comptroller General of the United States, or an authorized representative, shall have access to and the right to examine any of the Contractor's directly pertinent records involving transactions related to this contract or a subcontract hereunder.

(2) This paragraph may not be construed to require the Contractor or subcontractor to create or maintain any record that the Contractor or subcontractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Reports. If the Contractor is required to furnish cost, funding, or performance reports, the Contracting Officer or an authorized representative of the Contracting Officer shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating (1) the effectiveness of the Contractor's policies and procedures to produce data compatible with the objectives of these reports and (2) the data reported.

(f) Availability. The Contractor shall make available at its office at all reasonable times the records, materials, and other evidence described in paragraphs (a), (b), (c), (d), and (e) of this clause, for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in Subpart 4.7, Contractor Records Retention, of the Federal Acquisition Regulation (FAR), or for any longer period required by statute or by other clauses of this contract. In addition--

- (1) If this contract is completely or partially terminated, the Contractor shall make available the records relating to the work terminated until 3 years after any resulting final termination settlement; and
- (2) The Contractor shall make available records relating to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to this contract until such appeals, litigation, or claims are finally resolved.

(g) The Contractor shall insert a clause containing all the terms of this clause, including this paragraph (g), in all subcontracts under this contract that exceed the simplified acquisition threshold, and--

- (1) That are cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable type or any combination of these;
- (2) For which cost or pricing data are required; or
- (3) That require the subcontractor to furnish reports as discussed in paragraph (e) of this clause.

The clause may be altered only as necessary to identify properly the contracting parties and the Contracting Officer under the Government prime contract.

(End of clause)

52.215-8 ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT (OCT 1997)

Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order:

- (a) The Schedule (excluding the specifications).
- (b) Representations and other instructions.
- (c) Contract clauses.
- (d) Other documents, exhibits, and attachments.
- (e) The specifications.

(End of clause)

52.215-11 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) This clause shall become operative only for any modification to this contract involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, except that this clause does not apply to any modification if an exception under FAR 15.403-1 applies.

(b) If any price, including profit or fee, negotiated in connection with any modification under this clause, or any cost reimbursable under this contract, was increased by any significant amount because (1) the Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data, (2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data, or (3) any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the contract shall be modified to reflect the reduction. This right to a price reduction is limited to that resulting from defects in data relating to modifications for which this clause becomes operative under paragraph (a) of this clause.

(c) Any reduction in the contract price under paragraph (b) of this clause due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which--

(1) The actual subcontract; or

(2) The actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.

(d)(1) If the Contracting Officer determines under paragraph (b) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense:

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted.

(ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer.

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract.

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2)(i) Except as prohibited by subdivision (d)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if--

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the cost or pricing data were available before the "as of" date specified on its Certificate of Current Cost or Pricing Data, and that the data were not submitted before such date.

(ii) An offset shall not be allowed if--

(A) The understated data were known by the Contractor to be understated before the "as of" date specified on its Certificate of Current Cost or Pricing Data; or

(B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the "as of" date specified on its Certificate of Current Cost or Pricing Data.

(e) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid--

(1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and

A penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data that were incomplete, inaccurate, or noncurrent.

(End of clause)

52.215-12 SUBCONTRACTOR COST OR PRICING DATA (OCT 1997)

(a) Before awarding any subcontract expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, on the date of agreement on price or the date of award, whichever is later; or before pricing any subcontract modification involving a pricing adjustment expected to exceed the threshold for submission of cost

or pricing data at FAR 15.403-4, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless an exception under FAR 15.403-1 applies.

(b) The Contractor shall require the subcontractor to certify in substantially the form prescribed in FAR 15.406-2 that, to the best of its knowledge and belief, the data submitted under paragraph (a) of this clause were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

(c) In each subcontract that exceeds the threshold for submission of cost or pricing data at FAR 15.403-4, when entered into, the Contractor shall insert either--

(1) The substance of this clause, including this paragraph (c), if paragraph (a) of this clause requires submission of cost or pricing data for the subcontract; or

(2) The substance of the clause at FAR 52.215-13, Subcontractor Cost or Pricing Data--Modifications.

52.215-13 SUBCONTRACTOR COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) The requirements of paragraphs (b) and (c) of this clause shall--

(1) Become operative only for any modification to this contract involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4; and

(2) Be limited to such modifications.

(b) Before awarding any subcontract expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, on the date of agreement on price or the date of award, whichever is later; or before pricing any subcontract modification involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless an exception under FAR 15.403-1 applies.

(c) The Contractor shall require the subcontractor to certify in substantially the form prescribed in FAR 15.406-2 that, to the best of its knowledge and belief, the data submitted under paragraph (b) of this clause were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

The Contractor shall insert the substance of this clause, including this paragraph (d), in each subcontract that exceeds the threshold for submission of cost or pricing data at FAR 15.403-4 on the date of agreement on price or the date of award, whichever is later.

(End of clause)

52.215-14 INTEGRITY OF UNIT PRICES (OCT 1997)

(a) Any proposal submitted for the negotiation of prices for items of supplies shall distribute costs within contracts on a basis that ensures that unit prices are in proportion to the items' base cost (e.g., manufacturing or acquisition costs). Any method of distributing costs to line items that distorts unit prices shall not be used. For example, distributing costs equally among line items is not acceptable except when there is little or no variation in base cost. Nothing in this paragraph requires submission of cost or pricing data not otherwise required by law or regulation.

(b) When requested by the Contracting Officer, the Offeror/Contractor shall also identify those supplies that it will not manufacture or to which it will not contribute significant value.

The Contractor shall insert the substance of this clause, less paragraph (b), in all subcontracts for other than: acquisitions at or below the simplified acquisition threshold in FAR Part 2; construction or architect-engineer services under FAR Part 36; utility services under FAR Part 41; services where supplies are not required; commercial items; and petroleum products.

(End of clause)

52.215-15 PENSION ADJUSTMENTS AND ASSET REVERSIONS (DEC 1998)

(a) The Contractor shall promptly notify the Contracting Officer in writing when it determines that it will terminate a defined-benefit pension plan or otherwise recapture such pension fund assets.

(b) For segment closings, pension plan terminations, or curtailment of benefits, the adjustment amount shall be the amount measured, assigned, and allocated in accordance with 48 CFR 9904.413-50(c)(12) for contracts and subcontracts that are subject to Cost Accounting Standards (CAS) Board rules and regulations (48 CFR Chapter 99). For contracts and subcontracts that are not subject to CAS, the adjustment amount shall be the amount measured, assigned, and allocated in accordance with 48 CFR 9904.413-50(c)(12), except the numerator of the fraction at 48 CFR 9904.413-50(c)(12)(vi) shall be the sum of the pension plan costs allocated to all non-CAS-covered contracts and subcontracts that are subject to Federal Acquisition Regulation (FAR) Subpart 31.2 or for which cost or pricing data were submitted.

(c) For all other situations where assets revert to the Contractor, or such assets are constructively received by it for any reason, the Contractor shall, at the Government's option, make a refund or give a credit to the Government for its equitable share of the gross amount withdrawn. The Government's equitable share shall reflect the Government's participation in pension costs through those contracts for which cost or pricing data were submitted or that are subject to FAR Subpart 31.2.

(d) The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(g).

(End of clause)

52.215-16 FACILITIES CAPITAL COST OF MONEY (JUN 2003)

(a) Facilities capital cost of money will be an allowable cost under the contemplated contract, if the criteria for allowability in FAR 31.205-10(b) are met. One of the allowability criteria requires the prospective Contractor to propose facilities capital cost of money in its offer.

(b) If the prospective Contractor does not propose this cost, the resulting contract will include the clause Waiver of Facilities Capital Cost of Money.

(End of provision)

52.215-17 WAIVER OF FACILITIES CAPITAL COST OF MONEY (OCT 1997)

The Contractor did not include facilities capital cost of money as a proposed cost of this contract. Therefore, it is an unallowable cost under this contract.

(End of clause)

52.215-18 REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (OCT 1997)

The Contractor shall promptly notify the Contracting Officer in writing when it determines that it will terminate or reduce a PRB plan. If PRB fund assets revert, or inure, to the Contractor or are constructively received by it under a plan termination or otherwise, the Contractor shall make a refund or give a credit to the Government for its equitable share as required by FAR 31.205-6(o)(6). The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirements of FAR 15.408(j).

(End of clause)

52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)

(a) The Contractor shall make the following notifications in writing:

(1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.

(2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall--

(1) Maintain current, accurate, and complete inventory records of assets and their costs;

(2) Provide the ACO or designated representative ready access to the records upon request;

(3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and

(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

(End of clause)

52.215-21 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403-4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable--

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Information on modifications of contracts or subcontracts for commercial items. (A) If--

(1) The original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item; and

(2) The modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

(1) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(2) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(3) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

As soon as practicable after agreement on price, but before award (except for unpriced actions), the Contractor

shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(End of clause)

52.215-21 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403-4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable--

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Information on modifications of contracts or subcontracts for commercial items. (A) If--

(1) The original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item; and

(2) The modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

(1) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(2) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(3) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

As soon as practicable after agreement on price, but before award (except for unpriced actions), the Contractor shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(End of clause)

52.219-3 NOTICE OF TOTAL HUBZONE SET-ASIDE (JAN 1999)

(a) Definition. HUBZone small business concern, as used in this clause, means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

(b) General. (1) Offers are solicited only from HUBZone small business concerns. Offers received from concerns that are not HUBZone small business concerns shall not be considered.

(2) Any award resulting from this solicitation will be made to a HUBZone small business concern.

(c) Agreement. A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for--

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than acquisition from a nonmanufacturer of the supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns.

(d) A HUBZone joint venture agrees that, in the performance of the contract, the applicable percentage specified in paragraph (c) of this clause will be performed by the HUBZone small business participant or participants.

(e) A HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business manufacturer concerns. This paragraph does not apply in connection with construction or service contracts.

(End of clause)

52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2000)

(a) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

Definitions. As used in this contract--

HUBZone small business concern means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

Small business concern means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

Small disadvantaged business concern means a small business concern that represents, as part of its offer that--

(1) It has received certification as a small disadvantaged business concern consistent with 13 CFR part 124, subpart B;

(2) No material change in disadvantaged ownership and control has occurred since its certification;

(3) Where the concern is owned by one or more individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(4) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

Veteran-owned small business concern means a small business concern--

- (1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and
- (2) The management and daily business operations of which are controlled by one or more veterans.

Women-owned small business concern means a small business concern--

- (1) That is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and
- (2) Whose management and daily business operations are controlled by one or more women.
- (d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a HUBZone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

(End of clause)

52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (JAN 2002)

- (a) This clause does not apply to small business concerns.
- (b) Definitions. As used in this clause--

Commercial item means a product or service that satisfies the definition of commercial item in section 2.101 of the Federal Acquisition Regulation.

Commercial plan means a subcontracting plan (including goals) that covers the offeror's fiscal year and that applies to the entire production of commercial items sold by either the entire company or a portion thereof (e.g., division, plant, or product line).

Individual contract plan means a subcontracting plan that covers the entire contract period (including option periods), applies to a specific contract, and has goals that are based on the offeror's planned subcontracting in support of the specific contract, except that indirect costs incurred for common or joint purposes may be allocated on a prorated basis to the contract.

Master plan means a subcontracting plan that contains all the required elements of an individual contract plan, except goals, and may be incorporated into individual contract plans, provided the master plan has been approved.

Subcontract means any agreement (other than one involving an employer-employee relationship) entered into by a Federal Government prime Contractor or subcontractor calling for supplies or services required for performance of the contract or subcontract.

- (c) The offeror, upon request by the Contracting Officer, shall submit and negotiate a subcontracting plan, where applicable, that separately addresses subcontracting with small business, veteran-owned small business, HUBZone small business concerns, small disadvantaged business, and women-owned small business concerns. If the offeror is submitting an individual contract plan, the plan must separately address subcontracting with small business,

veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns, with a separate part for the basic contract and separate parts for each option (if any). The plan shall be included in and made a part of the resultant contract. The subcontracting plan shall be negotiated within the time specified by the Contracting Officer. Failure to submit and negotiate the subcontracting plan shall make the offeror ineligible for award of a contract.

(d) The offeror's subcontracting plan shall include the following:

(1) Goals, expressed in terms of percentages of total planned subcontracting dollars, for the use of small business, veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. The offeror shall include all subcontracts that contribute to contract performance, and may include a proportionate share of products and services that are normally allocated as indirect costs.

(2) A statement of--

(i) Total dollars planned to be subcontracted for an individual contract plan; or the offeror's total projected sales, expressed in dollars, and the total value of projected subcontracts to support the sales for a commercial plan;

(ii) Total dollars planned to be subcontracted to small business concerns;

(iii) Total dollars planned to be subcontracted to veteran-owned small business concerns;

(iv) Total dollars planned to be subcontracted to HUBZone small business concerns;

(v) Total dollars planned to be subcontracted to small disadvantaged business concerns; and

(vi) Total dollars planned to be subcontracted to women-owned small business concerns.

(3) A description of the principal types of supplies and services to be subcontracted, and an identification of the types planned for subcontracting to--

(i) Small business concerns;

(ii) Veteran-owned small business concerns;

(iii) HUBZone small business concerns;

(iv) Small disadvantaged business concerns; and

(v) Women-owned small business concerns.

(4) A description of the method used to develop the subcontracting goals in paragraph (d)(1) of this clause.

(5) A description of the method used to identify potential sources for solicitation purposes (e.g., existing company source lists, the Procurement Marketing and Access Network (PRO-Net) of the Small Business Administration (SBA), veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged, and women-owned small business trade associations). A firm may rely on the information contained in PRO-Net as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining a small, veteran-owned small, HUBZone small, small disadvantaged, and women-owned small business source list. Use of PRO-Net as its source list does not relieve a

firm of its responsibilities (e.g., outreach, assistance, counseling, or publicizing subcontracting opportunities) in this clause.

(6) A statement as to whether or not the offeror included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with—

- (i) Small business concerns;
- (ii) Veteran-owned small business concerns;
- (iii) HUBZone small business concerns;
- (iv) Small disadvantaged business concerns; and
- (v) Women-owned small business concerns.

(7) The name of the individual employed by the offeror who will administer the offeror's subcontracting program, and a description of the duties of the individual.

(8) A description of the efforts the offeror will make to assure that small business, veteran-owned small business, HUBZone small business, small disadvantaged business and women-owned small business concerns have an equitable opportunity to compete for subcontracts.

(9) Assurances that the offeror will include the clause of this contract entitled "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of \$500,000 (\$1,000,000 for construction of any public facility) to adopt a subcontracting plan that complies with the requirements of this clause.

(10) Assurances that the offeror will--

- (i) Cooperate in any studies or surveys as may be required;
- (ii) Submit periodic reports so that the Government can determine the extent of compliance by the offeror with the subcontracting plan;
- (iii) Submit Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and/or SF 295, Summary Subcontract Report, in accordance with paragraph (j) of this clause. The reports shall provide information on subcontract awards to small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, small disadvantaged business concerns, women-owned small business concerns, and Historically Black Colleges and Universities and Minority Institutions. Reporting shall be in accordance with the instructions on the forms or as provided in agency regulations.
- (iv) Ensure that its subcontractors agree to submit SF 294 and SF 295.

(11) A description of the types of records that will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of the offeror's efforts to locate small business, veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated)

- (i) Source lists (e.g., PRO-Net), guides, and other data that identify small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.

(ii) Organizations contacted in an attempt to locate sources that are small business, veteran-owned small business, HUBZone small business, small disadvantaged business, or women-owned small business concerns.

(iii) Records on each subcontract solicitation resulting in an award of more than \$100,000, indicating--

(A) Whether small business concerns were solicited and, if not, why not;

(B) Whether veteran-owned small business concerns were solicited and, if not, why not;

(C) Whether HUBZone small business concerns were solicited and, if not, why not;

(D) Whether small disadvantaged business concerns were solicited and, if not, why not;

(E) Whether women-owned small business concerns were solicited and, if not, why not; and

(F) If applicable, the reason award was not made to a small business concern.

(iv) Records of any outreach efforts to contact--

(A) Trade associations;

(B) Business development organizations;

(C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, and women-owned small business sources; and

(D) Veterans service organizations.

(v) Records of internal guidance and encouragement provided to buyers through--

(A) Workshops, seminars, training, etc.; and

(B) Monitoring performance to evaluate compliance with the program's requirements.

(vi) On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor. Contractors having commercial plans need not comply with this requirement.

(e) In order to effectively implement this plan to the extent consistent with efficient contract performance, the Contractor shall perform the following functions:

(1) Assist small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.

(2) Provide adequate and timely consideration of the potentialities of small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns in all "make-or-buy" decisions.

(3) Counsel and discuss subcontracting opportunities with representatives of small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business firms.

(4) Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as small, veteran-owner small business, HUBZone small, small disadvantaged, or women-owned small business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor's subcontracting plan.

(f) A master plan on a plant or division-wide basis that contains all the elements required by paragraph (d) of this clause, except goals, may be incorporated by reference as a part of the subcontracting plan required of the offeror by this clause; provided--

(1) the master plan has been approved, (2) the offeror ensures that the master plan is updated as necessary and provides copies of the approved master plan, including evidence of its approval, to the Contracting Officer, and (3) goals and any deviations from the master plan deemed necessary by the Contracting Officer to satisfy the requirements of this contract are set forth in the individual subcontracting plan.

(g) A commercial plan is the preferred type of subcontracting plan for contractors furnishing commercial items. The commercial plan shall relate to the offeror's planned subcontracting generally, for both commercial and Government business, rather than solely to the Government contract. Commercial plans are also preferred for subcontractors that provide commercial items under a prime contract, whether or not the prime contractor is supplying a commercial item.

(h) Prior compliance of the offeror with other such subcontracting plans under previous contracts will be considered by the Contracting Officer in determining the responsibility of the offeror for award of the contract.

(i) The failure of the Contractor or subcontractor to comply in good faith with (1) the clause of this contract entitled "Utilization Of Small Business Concerns," or (2) an approved plan required by this clause, shall be a material breach of the contract.

(j) The Contractor shall submit the following reports:

(1) Standard Form 294, Subcontracting Report for Individual Contracts. This report shall be submitted to the Contracting Officer semiannually and at contract completion. The report covers subcontract award data related to this contract. This report is not required for commercial plans.

(2) Standard Form 295, Summary Subcontract Report. This report encompasses all of the contracts with the awarding agency. It must be submitted semi-annually for contracts with the Department of Defense and annually for contracts with civilian agencies. If the reporting activity is covered by a commercial plan, the reporting activity must report annually all subcontract awards under that plan. All reports submitted at the close of each fiscal year (both individual and commercial plans) shall include a breakout, in the Contractor's format, of subcontract awards, in whole dollars, to small disadvantaged business concerns by North American Industry Classification System (NAICS) Industry Subsector. For a commercial plan, the Contractor may obtain from each of its subcontractors a predominant NAICS Industry Subsector and report all awards to that subcontractor under its predominant NAICS Industry Subsector.

(End of clause)

52.219-14 LIMITATIONS ON SUBCONTRACTING (DEC 1996)

(a) This clause does not apply to the unrestricted portion of a partial set-aside.

(b) By submission of an offer and execution of a contract, the Offeror/Contractor agrees that in performance of the contract in the case of a contract for--

(1) Services (except construction). At least 50 percent of the cost of contract performance incurred for personnel shall be expended for employees of the concern.

(2) Supplies (other than procurement from a nonmanufacturer of such supplies). The concern shall perform work for at least 50 percent of the cost of manufacturing the supplies, not including the cost of materials.

(3) General construction. The concern will perform at least 15 percent of the cost of the contract, not including the cost of materials, with its own employees.

(4) Construction by special trade contractors. The concern will perform at least 25 percent of the cost of the contract, not including the cost of materials, with its own employees.

52.219-16 LIQUIDATED DAMAGES-SUBCONTRACTING PLAN (JAN 1999)

(a) Failure to make a good faith effort to comply with the subcontracting plan, as used in this clause, means a willful or intentional failure to perform in accordance with the requirements of the subcontracting plan approved under the clause in this contract entitled "Small Business Subcontracting Plan," or willful or intentional action to frustrate the plan.

(b) Performance shall be measured by applying the percentage goals to the total actual subcontracting dollars or, if a commercial plan is involved, to the pro rata share of actual subcontracting dollars attributable to Government contracts covered by the commercial plan. If, at contract completion or, in the case of a commercial plan, at the close of the fiscal year for which the plan is applicable, the Contractor has failed to meet its subcontracting goals and the Contracting Officer decides in accordance with paragraph (c) of this clause that the Contractor failed to make a good faith effort to comply with its subcontracting plan, established in accordance with the clause in this contract entitled "Small Business Subcontracting Plan," the Contractor shall pay the Government liquidated damages in an amount stated. The amount of probable damages attributable to the Contractor's failure to comply shall be an amount equal to the actual dollar amount by which the Contractor failed to achieve each subcontract goal.

(c) Before the Contracting Officer makes a final decision that the Contractor has failed to make such good faith effort, the Contracting Officer shall give the Contractor written notice specifying the failure and permitting the Contractor to demonstrate what good faith efforts have been made and to discuss the matter. Failure to respond to the notice may be taken as an admission that no valid explanation exists. If, after consideration of all the pertinent data, the Contracting Officer finds that the Contractor failed to make a good faith effort to comply with the subcontracting plan, the Contracting Officer shall issue a final decision to that effect and require that the Contractor pay the Government liquidated damages as provided in paragraph (b) of this clause.

(d) With respect to commercial plans, the Contracting Officer who approved the plan will perform the functions of the Contracting Officer under this clause on behalf of all agencies with contracts covered by the commercial plan.

(e) The Contractor shall have the right of appeal, under the clause in this contract entitled Disputes, from any final decision of the Contracting Officer.

(f) Liquidated damages shall be in addition to any other remedies that the Government may have.

(End of clause)

52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)

If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice, including all relevant information, to the Contracting Officer.

(End of clause)

52.222-3 CONVICT LABOR (JUN 2003)

(a) Except as provided in paragraph (b) of this clause, the Contractor shall not employ in the performance of this contract any person undergoing a sentence of imprisonment imposed by any court of a State, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands.

(b) The Contractor is not prohibited from employing persons--

(1) On parole or probation to work at paid employment during the term of their sentence;

(2) Who have been pardoned or who have served their terms; or

(3) Confined for violation of the laws of any of the States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if--

(i) The worker is paid or is in an approved work training program on a voluntary basis;

(ii) Representatives of local union central bodies or similar labor union organizations have been consulted;

(iii) Such paid employment will not result in the displacement of employed workers, or be applied in skills, crafts, or trades in which there is a surplus of available gainful labor in the locality, or impair existing contracts for services;

(iv) The rates of pay and other conditions of employment will not be less than those paid or provided for work of a similar nature in the locality in which the work is being performed; and

(v) The Attorney General of the United States has certified that the work-release laws or **regulations** of the jurisdiction involved are in conformity with the requirements of Executive Order 11755, as amended by Executive Orders 12608 and 12943.

(End of clause)

52.222-4 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION. (SEP 2000)

(a) Overtime requirements. No Contractor or subcontractor employing laborers or mechanics (see Federal Acquisition Regulation 22.300) shall require or permit them to work over 40 hours in any workweek unless they are paid at least 1 and 1/2 times the basic rate of pay for each hour worked over 40 hours.

(b) Violation; liability for unpaid wages; liquidated damages. The responsible Contractor and subcontractor are liable for unpaid wages if they violate the terms in paragraph (a) of this clause. In addition, the Contractor and subcontractor are liable for liquidated damages payable to the Government. The Contracting Officer will assess liquidated damages at the rate of \$10 per affected employee for each calendar day on which the employer required or permitted the employee to work in excess of the standard workweek of 40 hours without paying overtime wages required by the Contract Work Hours and Safety Standards Act.

(c) Withholding for unpaid wages and liquidated damages. The Contracting Officer will withhold from payments due under the contract sufficient funds required to satisfy any Contractor or subcontractor liabilities for unpaid wages and liquidated damages. If amounts withheld under the contract are insufficient to satisfy Contractor or subcontractor liabilities, the Contracting Officer will withhold payments from other Federal or Federally assisted contracts held by the same Contractor that are subject to the Contract Work Hours and Safety Standards Act.

(d) Payrolls and basic records.

(1) The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after contract completion. The records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records need not duplicate those required for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph (d)(1) of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

(e) Subcontracts. The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts exceeding \$100,000 and require subcontractors to include these provisions in any lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.

(End of clause)

52.222-6 DAVIS-BACON ACT (FEB 1995)

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (d) of this clause; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period. Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in the clause entitled Apprentices and Trainees. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually

worked therein; provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (b) of this clause) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(b)(1) The Contracting Officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination.

(ii) The classification is utilized in the area by the construction industry.

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator or an authorized representative will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (b)(2) and (b)(3) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(vi) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(End of clause)

52.222-7 WITHHOLDING OF FUNDS (FEB 1988)

The Contracting Officer shall, upon his or her own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same Prime Contractor, or any other Federally assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same Prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(End of clause)

52.222-8 PAYROLLS AND BASIC RECORDS (FEB 1988)

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled Davis-Bacon Act, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b)(1) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph (a) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify--

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than

permissible deductions as set forth in the Regulations, 29 CFR Part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (b)(2) of this clause.

(4) The falsification of any of the certifications in this clause may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or the Department of Labor to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(End of clause)

52.222-9 APPRENTICES AND TRAINEES (FEB 1988)

(a) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(End of clause)

52.222-10 COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.

(End of clause)

52.222-11 SUBCONTRACTS (LABOR STANDARDS (FEB 1988)

(a) The Contractor or subcontractor shall insert in any subcontracts the clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act-Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Withholding of Funds, Subcontracts (Labor Standards), Contract Termination-Debarment, Disputes Concerning Labor Standards, Compliance with Davis-Bacon and Related Act Regulations, and Certification of Eligibility, and such other clauses as the Contracting Officer may, by appropriate instructions, require, and also a clause requiring subcontractors to include these clauses in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses cited in this paragraph.

(b)(1) Within 14 days after award of the contract, the Contractor shall deliver to the Contracting Officer a completed Statement and Acknowledgment Form (SF 1413) for each subcontract, including the subcontractor's signed and dated acknowledgment that the clauses set forth in paragraph (a) of this clause have been included in the subcontract.

- (c) Within 14 days after the award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

(End of clause)

52.222-12 CONTRACT TERMINATION--DEBARMENT (FEB 1988)

A breach of the contract clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act--Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis-Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

(End of clause)

52.222-13 COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are hereby incorporated by reference in this contract.

(End of clause)

52.222-14 DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

The United States Department of Labor has set forth in 29 CFR Parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(End of clause)

52.222-15 CERTIFICATION OF ELIGIBILITY (FEB 1988)

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(vii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(End of clause)

52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)

(a) Segregated facilities, as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

(End of clause)

52.222-26 EQUAL OPPORTUNITY (APR 2002)

(a) Definition. United States, as used in this clause, means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with paragraphs (b)(1) through (b)(11) of this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

(End of clause)

52.222-27 AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION (FEB 1999)

(a) Definitions. "Covered area," as used in this clause, means the geographical area described in the solicitation for this contract.

"Deputy Assistant Secretary," as used in this clause, means Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, or a designee.

"Employer's identification number," as used in this clause, means the Federal Social Security number used on the employer's quarterly federal tax return, U.S. Treasury Department Form 941.

"Minority," as used in this clause, means--

(1) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

(2) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands);

(3) Black (all persons having origins in any of the black African racial groups not of Hispanic origin); and

(4) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

(b) If the Contractor, or a subcontractor at any tier, subcontracts a portion of the work involving any construction trade, each such subcontract in excess of \$10,000 shall include this clause and the Notice containing the goals for minority and female participation stated in the solicitation for this contract.

(c) If the Contractor is participating in a Hometown Plan (41 CFR 60-4) approved by the U.S. Department of Labor in a covered area, either individually or through an association, its affirmative action obligations on all work in the plan area (including goals) shall comply with the plan for those trades that have unions participating in the plan. Contractors must be able to demonstrate participation in, and compliance with, the provisions of the plan. Each Contractor or subcontractor participating in an approved plan is also required to comply with its obligations under the Equal Opportunity clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good-faith performance by other Contractors or subcontractors toward a goal in an approved plan does not excuse any Contractor's or subcontractor's failure to make good-faith efforts to achieve the plan's goals.

(d) The Contractor shall implement the affirmative action procedures in subparagraphs (g)(1) through (16) of this clause. The goals stated in the solicitation for this contract are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where that work is actually performed. The Contractor is expected to make substantially uniform progress toward its goals in each craft.

(e) Neither the terms and conditions of any collective bargaining agreement, nor the failure by a union with which the Contractor has a collective bargaining agreement, to refer minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, as amended, or the regulations thereunder.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

(g) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and implement affirmative action steps at least as extensive as the following:

(1) Ensure a working environment free of harassment, intimidation, and coercion at all sites and in all facilities where the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women to each construction project. The Contractor shall ensure that foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.

(2) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Establish and maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations, and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.

(4) Immediately notify the Deputy Assistant Secretary when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area that expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under subparagraph (g)(2) of this clause.

(6) Disseminate the Contractor's equal employment policy by--

(i) Providing notice of the policy to unions and to training, recruitment, and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its contract obligations;

(ii) Including the policy in any policy manual and in collective bargaining agreements;

(iii) Publicizing the policy in the company newspaper, annual report, etc.;

(iv) Reviewing the policy with all management personnel and with all minority and female employees at least once a year; and

(v) Posting the policy on bulletin boards accessible to employees at each location where construction work is performed.

(7) Review, at least annually, the Contractor's equal employment policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination, or other employment decisions. Conduct review of this policy with all on-site supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's equal employment policy externally by including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to, and discuss this

policy with, other Contractors and subcontractors with which the Contractor does or anticipates doing business.

(9) Direct recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than 1 month before the date for acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after-school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's workforce.

(11) Validate all tests and other selection requirements where required under 41 CFR 60-3.

(12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc., opportunities for promotion.

(13) Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the Contractor's obligations under this contract are being carried out.

(14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user rest rooms and necessary dressing or sleeping areas shall be provided to assure privacy between the sexes.

(15) Maintain a record of solicitations for subcontracts for minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment policy and affirmative action obligations.

(h) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained in subparagraphs (g)(1) through (16) of this clause. The efforts of a contractor association, joint contractor-union, contractor-community, or similar group of which the contractor is a member and participant may be asserted as fulfilling one or more of its obligations under subparagraphs (g)(1) through (16) of this clause, provided the Contractor--

(1) Actively participates in the group;

(2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;

(3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;

(4) Makes a good-faith effort to meet its individual goals and timetables; and

(5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

(i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is

required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.

(j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.

(l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.

(m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g) of this clause, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Deputy Assistant Secretary shall take action as prescribed in 41 CFR 60-4.8.

(n) The Contractor shall designate a responsible official to--

(1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;

(2) Submit reports as may be required by the Government; and

(3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.

Nothing contained herein shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(End of clause)

52.222-35 EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

(a) Definitions. As used in this clause--

All employment openings means all positions except executive and top management, those positions that will be filled from within the Contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days duration, and part-time employment.

Executive and top management means any employee--

- (1) Whose primary duty consists of the management of the enterprise in which the individual is employed or of a customarily recognized department or subdivision thereof;
- (2) Who customarily and regularly directs the work of two or more other employees;
- (3) Who has the authority to hire or fire other employees or whose suggestions and recommendations as to the hiring or firing and as to the advancement and promotion or any other change of status of other employees will be given particular weight;
- (4) Who customarily and regularly exercises discretionary powers; and
- (5) Who does not devote more than 20 percent or, in the case of an employee of a retail or service establishment, who does not devote more than 40 percent of total hours of work in the work week to activities that are not directly and closely related to the performance of the work described in paragraphs (1) through (4) of this definition. This paragraph (5) does not apply in the case of an employee who is in sole charge of an establishment or a physically separated branch establishment, or who owns at least a 20 percent interest in the enterprise in which the individual is employed.

Other eligible veteran means any other veteran who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized.

Positions that will be filled from within the Contractor's organization means employment openings for which the Contractor will give no consideration to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings the Contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

Qualified special disabled veteran means a special disabled veteran who satisfies the requisite skill, experience, education, and other job-related requirements of the employment position such veteran holds or desires, and who, with or without reasonable accommodation, can perform the essential functions of such position.

Special disabled veteran means--

- (1) A veteran who is entitled to compensation (or who but for the receipt of military retired pay would be entitled to compensation) under laws administered by the Department of Veterans Affairs for a disability--
 - (i) Rated at 30 percent or more; or
 - (ii) Rated at 10 or 20 percent in the case of a veteran who has been determined under 38 U.S.C. 3106 to have a serious employment handicap (i.e., a significant impairment of the veteran's ability to prepare for, obtain, or retain employment consistent with the veteran's abilities, aptitudes, and interests); or
- (2) A person who was discharged or released from active duty because of a service-connected disability.

Veteran of the Vietnam era means a person who--

- (1) Served on active duty for a period of more than 180 days and was discharged or released from active duty with other than a dishonorable discharge, if any part of such active duty occurred--
 - (i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases; or

(2) Was discharged or released from active duty for a service-connected disability if any part of the active duty was performed--

(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases.

(b) General. (1) The Contractor shall not discriminate against the individual because the individual is a special disabled veteran, a veteran of the Vietnam era, or other eligible veteran, regarding any position for which the employee or applicant for employment is qualified. The Contractor shall take affirmative action to employ, advance in employment, and otherwise treat qualified special disabled veterans, veterans of the Vietnam era, and other eligible veterans without discrimination based upon their disability or veterans' status in all employment practices such as--

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

(iii) Rate of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(v) Leaves of absence, sick leave, or any other leave;

(vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;

(vii) Selection and financial support for training, including apprenticeship, and on-the-job training under 38 U.S.C. 3687, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(viii) Activities sponsored by the Contractor including social or recreational programs; and

(ix) Any other term, condition, or privilege of employment.

(2) The Contractor shall comply with the rules, regulations, and relevant orders of the Secretary of Labor issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended (38 U.S.C. 4211 and 4212).

(c) Listing openings. (1) The Contractor shall immediately list all employment openings that exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract, and including those occurring at an establishment of the Contractor other than the one where the contract is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local public employment service office of the State wherein the opening occurs. Listing employment openings with the U.S. Department of Labor's America's Job Bank shall satisfy the requirement to list jobs with the local employment service office.

(2) The Contractor shall make the listing of employment openings with the local employment service office at least concurrently with using any other recruitment source or effort and shall involve the normal obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing of employment openings does not require hiring any particular job applicant or hiring from any particular group of job applicants

and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(3) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State public employment agency in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State agency, it need not advise the State agency of subsequent contracts. The Contractor may advise the State agency when it is no longer bound by this contract clause.

(d) Applicability. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, the Virgin Islands of the United States, and Wake Island.

(e) Postings. (1) The Contractor shall post employment notices in conspicuous places that are available to employees and applicants for employment.

(2) The employment notices shall--

(i) State the rights of applicants and employees as well as the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants who are special disabled veterans, veterans of the Vietnam era, and other eligible veterans; and

(ii) Be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary of Labor), and provided by or through the Contracting Officer.

(3) The Contractor shall ensure that applicants or employees who are special disabled veterans are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled veteran, or may lower the posted notice so that it can be read by a person in a wheelchair).

(4) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement, or other contract understanding, that the Contractor is bound by the terms of the Act and is committed to take affirmative action to employ, and advance in employment, qualified special disabled veterans, veterans of the Vietnam era, and other eligible veterans.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, the Government may take appropriate actions under the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(g) Subcontracts. The Contractor shall insert the terms of this clause in all subcontracts or purchase orders of \$25,000 or more unless exempted by rules, regulations, or orders of the Secretary of Labor. The Contractor shall act as specified by the Deputy Assistant Secretary of Labor to enforce the terms, including action for noncompliance.

(End of clause)

52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified

individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as--

- (i) Recruitment, advertising, and job application procedures;
- (ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;
- (iii) Rates of pay or any other form of compensation and changes in compensation;
- (iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
- (v) Leaves of absence, sick leave, or any other leave;
- (vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;
- (vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
- (viii) Activities sponsored by the Contractor, including social or recreational programs; and
- (ix) Any other term, condition, or privilege of employment.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating--

(i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and

(ii) The rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

52.222-37 EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

(a) Unless the Contractor is a State or local government agency, the Contractor shall report at least annually, as required by the Secretary of Labor, on--

(1) The number of disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than September 30 of each year beginning September 30, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that the information is voluntarily provided; that the information will be kept confidential; that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

(End of clause)

52.222-38 COMPLIANCE WITH VETERANS' EMPLOYMENT REPORTING REQUIREMENTS (DEC 2001)

By submission of its offer, the offeror represents that, if it is subject to the reporting requirements of 38 U.S.C. 4212(d) (i.e., if it has any contract containing Federal Acquisition Regulation clause 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans), it has submitted the most recent VETS-100 Report required by that clause.

(End of provision)

52.223-3 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997)

(a) "Hazardous material", as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).

(b) The offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

Material	Identification No.
(If none, insert "None")	
_____	_____
_____	_____
_____	_____

(c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

(e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to--

(i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) The Government is not precluded from using similar or identical data acquired from other sources.

(End of clause)

52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

(a) Definitions. As used in this clause --

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession, or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall-- within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration--

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about--

(i) The dangers of drug abuse in the workplace;

(ii) The Contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will--

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;

(6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

(i) Taking appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.

(c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.

(d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

(End of clause)

52.223-9 ESTIMATE OF PERCENTAGE OF RECOVERED MATERIAL CONTENT FOR EPA-DESIGNATED PRODUCTS (AUG 2000)

(a) Definitions. As used in this clause--

Postconsumer material means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of "recovered material."

Recovered material means waste materials and by-products recovered or diverted from solid waste, but the term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.

(b) The Contractor, on completion of this contract, shall--

(1) Estimate the percentage of the total recovered material used in contract performance, including, if applicable, the percentage of postconsumer material content; and

(2) Submit this estimate to Pamela Wellons, Contracting Officer, US Army Corps of Engineers, Kansas City District.

(End of clause)

52.223-14 TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)

(a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.

(b) A Contractor-owned or -operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if--

(1) The facility does not manufacture, process, or otherwise use any toxic chemicals listed in 40 CFR 372.65;

(2) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

(3) The facility does not meet the reporting thresholds of toxic chemicals established under of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

(4) The facility does not fall within the following Standard Industrial Classification (SIC) codes or their corresponding North American Industry Classification System sectors:

(i) Major group code 10 (except 1011, 1081, and 1094.

(ii) Major group code 12 (except 1241).

(iii) Major group codes 20 through 39.

(iv) Industry code 4911, 4931, or 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce).

(v) Industry code 4953 (limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C (42 U.S.C. 6921, et seq.)), 5169, 5171, or 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis); or

(5) The facility is not located in the United States or its outlying areas.

(c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt--

(1) The Contractor shall notify the Contracting Officer; and

(2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall (i) submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and (ii) continue to file the annual Form R for the life of the contract for such facility.

(d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting requirements.

(e) Except for acquisitions of commercial items, as defined in FAR Part 2, the Contractor shall--

(1) For competitive subcontracts expected to exceed \$100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and

(2) Include in any resultant subcontract exceeding \$100,000 (including all options), the substance of this clause, except this paragraph (e).

(End of clause)

52.224-1 PRIVACY ACT NOTIFICATION (APR 1984)

The Contractor will be required to design, develop, or operate a system of records on individuals, to accomplish an agency function subject to the Privacy Act of 1974, Public Law 93-579, December 31, 1974 (5 U.S.C. 552a) and applicable agency regulations. Violation of the Act may involve the imposition of criminal penalties.

(End of clause)

52.224-2 PRIVACY ACT (APR 1984)

(a) The Contractor agrees to--

(1) Comply with the Privacy Act of 1974 (the Act) and the agency rules and regulations issued under the Act in the design, development, or operation of any system of records on individuals to accomplish an agency function when the contract specifically identifies--

(i) The systems of records; and

(ii) The design, development, or operation work that the contractor is to perform;

(2) Include the Privacy Act notification contained in this contract in every solicitation and resulting subcontract and in every subcontract awarded without a solicitation, when the work statement in the proposed subcontract requires the redesign, development, or operation of a system of records on individuals that is subject to the Act; and

(3) Include this clause, including this subparagraph (3), in all subcontracts awarded under this contract which requires the design, development, or operation of such a system of records.

(b) In the event of violations of the Act, a civil action may be brought against the agency involved when the violation concerns the design, development, or operation of a system of records on individuals to accomplish an agency function, and criminal penalties may be imposed upon the officers or employees of the agency when the

violation concerns the operation of a system of records on individuals to accomplish an agency function. For purposes of the Act, when the contract is for the operation of a system of records on individuals to accomplish an agency function, the Contractor is considered to be an employee of the agency.

(c)(1) "Operation of a system of records," as used in this clause, means performance of any of the activities associated with maintaining the system of records, including the collection, use, and dissemination of records.

(2) "Record," as used in this clause, means any item, collection, or grouping of information about an individual that is maintained by an agency, including, but not limited to, education, financial transactions, medical history, and criminal or employment history and that contains the person's name, or the identifying number, symbol, or other identifying particular assigned to the individual, such as a fingerprint or voiceprint or a photograph.

(3) "System of records on individuals," as used in this clause, means a group of any records under the control of any agency from which information is retrieved by the name of the individual or by some identifying number, symbol, or other identifying particular assigned to the individual.

(End of clause)

52.225-9 BUY AMERICAN ACT—CONSTRUCTION MATERIALS (JUN 2003)

(a) Definitions. As used in this clause--

Component means an article, material, or supply incorporated directly into a construction material.

Construction material means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means--

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

Domestic construction material means--

(1) An unmanufactured construction material mined or produced in the United States; or

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

Foreign construction material means a construction material other than a domestic construction material.

United States means the 50 States, the District of Columbia, and outlying areas.

(b) Domestic preference. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) by providing a preference for domestic construction material. The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to the construction material or components listed by the Government as follows:

NONE

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act. (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

Construction material description	Unit of measure	Quantity	Price (dollars)\1\
Item 1			
Foreign construction material....			
Domestic construction material...			
Item 2			
Foreign construction material....			
Domestic construction material...			

Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).

List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.

Include other applicable supporting information.

(End of clause)

52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT--CONSTRUCTION MATERIALS (MAY 2002)

(a) Definitions. Construction material, domestic construction material, and foreign construction material, as used in this provision, are defined in the clause of this solicitation entitled "Buy American Act --Construction Materials" (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) Requests for determinations of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers. (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

(i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

52.225-11 BUY AMERICAN ACT--CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (JUN 2003)

(a) Definitions. As used in this clause--

Component means an article, material, or supply incorporated directly into a construction material.

Construction material means an article, material, or supply brought to the construction site by the Contractor or subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means--

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

Designated country means any of the following countries: Aruba, Austria, Bangladesh, Belgium, Benin, Bhutan, Botswana, Burkina Faso, Burundi, Canada, Cape Verde, Central African Republic, Chad, Comoros, Denmark.

Djibouti, Equatorial Guinea, Finland, France, Gambia, Germany, Greece, Guinea, Guinea-Bissau, Haiti, Hong Kong, Ireland, Israel, Italy, Japan.

Kiribati, Korea, Republic of, Lesotho, Liechtenstein, Luxembourg, Malawi, Maldives, Mali, Mozambique, Nepal, Netherlands, Niger, Norway, Portugal, Rwanda.

Sao Tome and Principe, Sierra Leone, Singapore, Somalia, Spain, Sweden, Switzerland, Tanzania U.R., Togo, Tuvalu, Uganda, United Kingdom, Vanuatu, Western Samoa, Yemen.

Designated country construction material means a construction material that--

(1) Is wholly the growth, product, or manufacture of a designated country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a designated country into a new and different construction material distinct from the materials from which it was transformed.

Domestic construction material means--

(1) An unmanufactured construction material mined or produced in the United States; or

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

Foreign construction material means a construction material other than a domestic construction material.

North American Free Trade Agreement country means Canada or Mexico.

North American Free Trade Agreement country construction material means a construction material that--

(1) Is wholly the growth, product, or manufacture of a North American Free Trade Agreement (NAFTA) country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a NAFTA country into a new and different construction material distinct from the materials from which it was transformed.

United States means the 50 States, the District of Columbia, and outlying areas.

(b) Construction materials. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) and the Balance of Payments Program by providing a preference for domestic construction material. In addition, the Contracting Officer has determined that the Trade Agreements Act and the North American Free Trade Agreement (NAFTA) apply to this acquisition. Therefore, the Buy American Act restrictions are waived for designated country and NAFTA country construction materials.

(2) The Contractor shall use only domestic, designated country, or NAFTA country construction material in performing this contract, except as provided in paragraphs (b)(3) and (b)(4) of this clause.

(3) The requirement in paragraph (b)(2) of this clause does not apply to the construction materials or components listed by the Government as follows:

NONE

(4) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(3) of this clause if the Government determines that--

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the restrictions of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act.

(1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(4) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(4)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

Construction material description	Unit of measure	Quantity	Price (dollars)\1\
Item 1:			
Foreign construction material....			
Domestic construction material...			
Item 2:			
Foreign construction material....			
Domestic construction material...			

\1\ Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).

List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.

Include other applicable supporting information.

(End of clause)

52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (OCT 2003)

(a) Except as authorized by the Office of Foreign Assets Control (OFAC) in the Department of the Treasury, the Contractor shall not acquire, for use in the performance of this contract, any supplies or services if any proclamation, Executive order, or statute administered by OFAC, or if OFAC's implementing regulations at 31 CFR chapter V, would prohibit such a transaction by a person subject to the jurisdiction of the United States.

(b) Except as authorized by OFAC, most transactions involving Cuba, Iran, Libya, and Sudan are prohibited, as are most imports from North Korea, into the United States or its outlying areas. Lists of entities and individuals subject to economic sanctions are included in OFAC's List of Specially Designated Nationals and Blocked

Persons at <http://www.epls.gov/Terlist1.html>. More information about these restrictions, as well as updates, is available in the OFAC's regulations at 31 CFR chapter V and/or on OFAC's Web site at <http://www.treas.gov/ofac>.

(c) The Contractor shall insert this clause, including this paragraph (c), in all subcontracts.

(End of clause)

52.226-1 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES (JUN 2000)

(a) Definitions. As used in this clause:

"Indian" means any person who is a member of any Indian tribe, band, group, pueblo or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any "Native" as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

"Indian organization" means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C., chapter 17.

"Indian-owned economic enterprise" means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitute not less than 51 percent of the enterprise.

"Indian tribe" means any Indian tribe, band, group, pueblo or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1542(c).

"Interested party" means a prime contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

(b) The Contractor shall use its best efforts to give Indian organizations and Indian-owned economic enterprises (25 U.S.C. 1544) the maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with efficient performance of its contract.

(1) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless an interested party challenges its status or the Contracting Officer has independent reason to question that status. In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to the U.S. Department of the Interior, Bureau of Indian Affairs (BIA), Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street, NW., MS 2626-MIB, Washington, DC 20240-4000.

The BIA will determine the eligibility and notify the Contracting Officer. No incentive payment will be made within 50 working days of subcontract award or while a challenge is pending. If a subcontractor is determined to be an ineligible participant, no incentive payment will be made under the Indian Incentive Program.

(2) The Contractor may request an adjustment under the Indian Incentive Program to the following:

(i) The estimated cost of a cost-type contract.

- (ii) The target cost of a cost-plus-incentive-fee prime contract.
 - (iii) The target cost and ceiling price of a fixed-price incentive prime contract.
 - (iv) The price of a firm-fixed-price prime contract.
- (3) The amount of the adjustment to the prime contract is 5 percent of the estimated cost, target cost, or firm-fixed-price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.
- (4) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.
- (c) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the amount paid to the subcontractor. The Contracting Officer will seek funding in accordance with agency procedures.
- (End of clause)

52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)

- (a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.
- (b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold (however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.)
- (End of clause)

52.228-2 ADDITIONAL BOND SECURITY (OCT 1997)

The Contractor shall promptly furnish additional security required to protect the Government and persons supplying labor or materials under this contract if--

- (a) Any surety upon any bond, or issuing financial institution for other security, furnished with this contract

becomes unacceptable to the Government.

- (b) Any surety fails to furnish reports on its financial condition as required by the Government;
- (c) The contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer; or
- (d) An irrevocable letter of credit (ILC) used as security will expire before the end of the period of required security. If the Contractor does not furnish an acceptable extension or replacement ILC, or other acceptable substitute, at least 30 days before an ILC's scheduled expiration, the Contracting officer has the right to immediately draw on the ILC.

(End of clause)

52.228-11 PLEDGES OF ASSETS (FEB 1992)

(a) Offerors shall obtain from each person acting as an individual surety on a bid guarantee, a performance bond, or a payment bond--

(1) Pledge of assets; and

(2) Standard Form 28, Affidavit of Individual Surety.

(b) Pledges of assets from each person acting as an individual surety shall be in the form of--

(1) Evidence of an escrow account containing cash, certificates of deposit, commercial or Government securities, or other assets described in FAR 28.203-2 (except see 28.203-2(b)(2) with respect to Government securities held in book entry form) and/or;

(2) A recorded lien on real estate. The offeror will be required to provide--

(i) Evidence of title in the form of a certificate of title prepared by a title insurance company approved by the United States Department of Justice. This title evidence must show fee simple title vested in the surety along with any concurrent owners; whether any real estate taxes are due and payable; and any recorded encumbrances against the property, including the lien filed in favor of the Government as required by FAR 28.203-3(d);

(ii) Evidence of the amount due under any encumbrance shown in the evidence of title;

(iii) A copy of the current real estate tax assessment of the property or a current appraisal dated no earlier than 6 months prior to the date of the bond, prepared by a professional appraiser who certifies that the appraisal has been conducted in accordance with the generally accepted appraisal standards as reflected in the Uniform Standards of Professional Appraisal Practice, as promulgated by the Appraisal Foundation.

(End of clause)

52.228-14 IRREVOCABLE LETTER OF CREDIT (DEC 1999)

(a) "Irrevocable letter of credit" (ILC), as used in this clause, means a written commitment by a federally insured financial institution to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Government (the beneficiary) of a written demand therefor. Neither the financial institution

nor the offeror/Contractor can revoke or condition the letter of credit.

(b) If the offeror intends to use an ILC in lieu of a bid bond, or to secure other types of bonds such as performance and payment bonds, the letter of credit and letter of confirmation formats in paragraphs (e) and (f) of this clause shall be used.

(c) The letter of credit shall be irrevocable, shall require presentation of no document other than a written demand and the ILC (including confirming letter, if any), shall be issued/confirmed by an acceptable federally insured financial institution as provided in paragraph (d) of this clause, and--

(1) If used as a bid guarantee, the ILC shall expire no earlier than 60 days after the close of the bid acceptance period;

(2) If used as an alternative to corporate or individual sureties as security for a performance or payment bond, the offeror/Contractor may submit an ILC with an initial expiration date estimated to cover the entire period for which financial security is required or may submit an ILC with an initial expiration date that is a minimum period of one year from the date of issuance. The ILC shall provide that, unless the issuer provides the beneficiary written notice of non-renewal at least 60 days in advance of the current expiration date, the ILC is automatically extended without amendment for one year from the expiration date, or any future expiration date, until the period of required coverage is completed and the Contracting Officer provides the financial institution with a written statement waiving the right to payment. The period of required coverage shall be:

(i) For contracts subject to the Miller Act, the later of--

(A) One year following the expected date of final payment;

(B) For performance bonds only, until completion of any warranty period; or

(C) For payment bonds only, until resolution of all claims filed against the payment bond during the one-year period following final payment.

(ii) For contracts not subject to the Miller Act, the later of--

(A) 90 days following final payment; or

(B) For performance bonds only, until completion of any warranty period.

(d) Only federally insured financial institutions rated investment grade or higher shall issue or confirm the ILC. The offeror/Contractor shall provide the Contracting Officer a credit rating that indicates the financial institution has the required rating(s) as of the date of issuance of the ILC. Unless the financial institution issuing the ILC had letter of credit business of less than \$25 million in the past year, ILCs over \$5 million must be confirmed by another acceptable financial institution that had letter of credit business of less than \$25 million in the past year.

(e) The following format shall be used by the issuing financial institution to create an ILC:

[Issuing Financial Institution's Letterhead or Name and Address]

Issue Date _____

IRREVOCABLE LETTER OF CREDIT NO. _____

Account party's name _____

Account party's address _____

For Solicitation No. _____(for reference only)

TO: [U.S. Government agency]

[U.S. Government agency's address]

1. We hereby establish this irrevocable and transferable Letter of Credit in your favor for one or more drawings up to United States \$_____. This Letter of Credit is payable at [issuing financial institution's and, if any, confirming financial institution's] office at [issuing financial institution's address and, if any, confirming financial institution's address] and expires with our close of business on _____, or any automatically extended expiration date.

2. We hereby undertake to honor your or the transferee's sight draft(s) drawn on the issuing or, if any, the confirming financial institution, for all or any part of this credit if presented with this Letter of Credit and confirmation, if any, at the office specified in paragraph 1 of this Letter of Credit on or before the expiration date or any automatically extended expiration date.

3. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for one year from the expiration date hereof, or any future expiration date, unless at least 60 days prior to any expiration date, we notify you or the transferee by registered mail, or other receipted means of delivery, that we elect not to consider this Letter of Credit renewed for any such additional period. At the time we notify you, we also agree to notify the account party (and confirming financial institution, if any) by the same means of delivery.

4. This Letter of Credit is transferable. Transfers and assignments of proceeds are to be effected without charge to either the beneficiary or the transferee/assignee of proceeds. Such transfer or assignment shall be only at the written direction of the Government (the beneficiary) in a form satisfactory to the issuing financial institution and the confirming financial institution, if any.

5. This Letter of Credit is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution, if any, otherwise state of issuing financial institution].

6. If this credit expires during an interruption of business of this financial institution as described in Article 17 of the UCP, the financial institution specifically agrees to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

[Issuing financial institution]

(f) The following format shall be used by the financial institution to confirm an ILC:

[Confirming Financial Institution's Letterhead or Name and Address]

(Date) _____

Our Letter of Credit Advice Number _____

Beneficiary: _____ [U.S. Government agency]

Issuing Financial Institution: _____

Issuing Financial Institution's LC No.: _____

Gentlemen:

1. We hereby confirm the above indicated Letter of Credit, the original of which is attached, issued by _____ [name of issuing financial institution] for drawings of up to United States dollars _____/U.S. \$_____ and expiring with our close of business on _____ [the expiration date], or any automatically extended expiration date.

2. Draft(s) drawn under the Letter of Credit and this Confirmation are payable at our office located at _____.

3. We hereby undertake to honor sight draft(s) drawn under and presented with the Letter of Credit and this Confirmation at our offices as specified herein.

4. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this confirmation that it be deemed automatically extended without amendment for one year from the expiration date hereof, or any automatically extended expiration date, unless:

(a) At least 60 days prior to any such expiration date, we shall notify the Contracting Officer, or the transferee and the issuing financial institution, by registered mail or other receipted means of delivery, that we elect not to consider this confirmation extended for any such additional period; or

(b) The issuing financial institution shall have exercised its right to notify you or the transferee, the account party, and ourselves, of its election not to extend the expiration date of the Letter of Credit.

5. This confirmation is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution].

6. If this confirmation expires during an interruption of business of this financial institution as described in Article 17 of the UCP, we specifically agree to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

[Confirming financial institution]

(g) The following format shall be used by the Contracting Officer for a sight draft to draw on the Letter of Credit:

SIGHT DRAFT

[City, State]

(Date) _____

[Name and address of financial institution]

Pay to the order of _____ [Beneficiary Agency] _____ the sum of United States
\$ _____. This draft is drawn under Irrevocable Letter of Credit No.

_____.

[Beneficiary Agency]

By: _____

(End of clause)

52.228-15 PERFORMANCE AND PAYMENT BONDS--CONSTRUCTION (JUL 2000)-

(a) Definitions. As used in this clause--

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) Amount of required bonds. Unless the resulting contract price is \$100,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) Additional bond protection. (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit,

or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, NW, 2nd Floor, West Wing, Washington, DC 20227.

(e) Notice of subcontractor waiver of protection (40 U.S.C. 270b(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

52.229-3 FEDERAL, STATE, AND LOCAL TAXES (APR 2003)

(a) As used in this clause--

"Contract date" means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties" means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax" means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax" means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

Local taxes includes taxes imposed by a possession or territory of the United States, Puerto Rico, or the Northern Mariana Islands, if the contract is performed wholly or partly in any of those areas.

(b) The contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds \$250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or

duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

(End of clause)

52.231-5000 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE MAR 1995)--EFARS

(a) This clause does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region _____. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

(End of clause)

52.232-5 PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (SEP 2002)

(a) Payment of price. The Government shall pay the Contractor the contract price as provided in this contract.

(b) Progress payments. The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.

(1) The Contractor's request for progress payments shall include the following substantiation:

(i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested.

(ii) A listing of the amount included for work performed by each subcontractor under the contract.

(iii) A listing of the total amount of each subcontract under the contract.

(iv) A listing of the amounts previously paid to each such subcontractor under the contract.

(v) Additional supporting data in a form and detail required by the Contracting Officer.

(2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if--

(i) Consideration is specifically authorized by this contract; and

(ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the following certification, or payment shall not be made: (However, if the Contractor elects to delete paragraph (c)(4) from the certification, the certification is still acceptable.)

I hereby certify, to the best of my knowledge and belief, that--

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) All payments due to subcontractors and suppliers from previous payments received under the contract have been made, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of chapter 39 of Title 31, United States Code;

(3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract; and

(4) This certification is not to be construed as final acceptance of a subcontractor's performance.

(Name)

(Title)

(Date)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to

conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall--

- (1) Notify the Contracting Officer of such performance deficiency; and
- (2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in paragraph (j) of this clause) equal to interest on the unearned amount from the 8th day after the date of receipt of the unearned amount until--
 - (i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or
 - (ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.
- (e) Retainage. If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.
- (f) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as--
 - (1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or
 - (2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.
- (g) Reimbursement for bond premiums. In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (e) of this clause shall not apply to that portion of progress payments attributable to bond premiums.
- (h) Final payment. The Government shall pay the amount due the Contractor under this contract after--
 - (1) Completion and acceptance of all work;
 - (2) Presentation of a properly executed voucher; and
 - (3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).
- (i) Limitation because of undefinitized work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on undefinitized contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional

supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(j) Interest computation on unearned amounts. In accordance with 31 U.S.C. 3903(c)(1), the amount payable under subparagraph (d)(2) of this clause shall be--

(1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and

(2) Deducted from the next available payment to the Contractor.

(End of clause)

52.232-17 INTEREST (JUNE 1996)

(a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid. reproduce, prepare derivative works, distribute copies to the public, and (b) Amounts shall be due at the earliest of the following dates:

(1) The date fixed under this contract.

(2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.

(3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.

(4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.

(c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(End of clause)

52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original

assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

(End of clause)

52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (OCT 2003)

Notwithstanding any other payment terms in this contract, the Government will make invoice payments under the terms and conditions specified in this clause. The Government considers payment as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in sections 2.101, 32.001, and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see paragraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Types of invoice payments. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project.

(A) The due date for making such payments is 14 days after the designated billing office receives a proper payment request. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date is the 14th day after the date of the Contractor's payment request, provided the designated billing office receives a proper payment request and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, is as specified in the contract or, if not specified, 30 days after approval by the Contracting Officer for release to the Contractor.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract).

(A) The due date for making such payments is the later of the following two events:

(1) The 30th day after the designated billing office receives a proper invoice from the Contractor.

(2) The 30th day after Government acceptance of the work or services completed by the Contractor. For a final invoice when the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance is deemed to occur on the effective date of the contract settlement.

(B) If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date is the 30th day after the date of the Contractor's invoice, provided the designated billing office receives a proper invoice and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(2)(i) through (a)(2)(xi) of this clause. If the invoice does not comply with these requirements, the designated billing office must return it within 7 days after receipt, with the reasons why it is not a proper invoice. When computing any interest penalty owed the Contractor, the Government will take into account if the Government notifies the Contractor of an improper invoice in an untimely manner.

(i) Name and address of the Contractor.

(ii) Invoice date and invoice number. (The Contractor should date invoices as close as possible to the date of mailing or transmission.)

(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., discount for prompt payment terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.

(viii) For payments described in paragraph (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(xi) Any other information or documentation required by the contract.

(3) Interest penalty. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.

(i) The designated billing office received a proper invoice.

(ii) The Government processed a receiving report or other Government documentation authorizing payment and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) Computing penalty amount. The Government will compute the interest penalty in accordance with the Office of Management and Budget prompt payment regulations at 5 CFR part 1315.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in paragraph (a)(1)(ii) of this clause, Government acceptance or approval is deemed to occur constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. If actual acceptance or approval occurs within the constructive acceptance or approval period, the Government will base the determination of an interest penalty on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The prompt payment regulations at 5 CFR 1315.10(c) do not require the Government to pay interest penalties if payment delays are due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. The Government and the Contractor shall resolve claims involving disputes, and any interest that may be payable in accordance with the clause at FAR 52.233-1, Disputes.

(5) Discounts for prompt payment. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if the Government takes a discount for prompt payment improperly. The Government will calculate the interest penalty in accordance with the prompt payment regulations at 5 CFR part 1315.

(6) Additional interest penalty. (i) The designated payment office will pay a penalty amount, calculated in accordance with the prompt payment regulations at 5 CFR part 1315 in addition to the interest penalty amount only if--

(A) The Government owes an interest penalty of \$1 or more;

(B) The designated payment office does not pay the interest penalty within 10 days after the date the invoice amount is paid; and

(C) The Contractor makes a written demand to the designated payment office for additional penalty payment, in accordance with paragraph (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) The Contractor shall support written demands for additional penalty payments with the following data. The Government will not request any additional data. The Contractor shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) If there is no postmark or the postmark is illegible--

(1) The designated payment office that receives the demand will annotate it with the date of receipt provided the demand is received on or before the 40th day after payment was made; or

(2) If the designated payment office fails to make the required annotation, the Government will determine the demand's validity based on the date the Contractor has placed on the demand, provided such date is no later than the 40th day after payment was made.

(b) Contract financing payments. If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.

(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause--

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to use:

(i) Include a payment clause and an interest penalty clause conforming to the standards set forth in paragraphs (c)(1) and (c)(2) of this clause in each of its subcontracts; and

(ii) Require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) Subcontract clause interpretation. The clauses required by paragraph (c) of this clause shall not be construed to impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that--

(1) Retainage permitted. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract

without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Withholding permitted. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Withholding requirements. Permit such withholding without incurring any obligation to pay a late payment penalty if--

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) The Contractor furnishes to the Contracting Officer a copy of any notice issued by a Contractor pursuant to paragraph (d)(3)(i) of this clause.

(e) Subcontractor withholding procedures. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall--

(1) Subcontractor notice. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to paragraph (e)(1) of this clause;

(3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (e)(1) of this clause;

(4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--

(i) Make such payment within--

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under paragraph (e)(5)(i)) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notice to Contracting Officer. Notify the Contracting Officer upon--

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--

(A) The amounts withheld under paragraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under paragraph (e)(5)(i) of this clause.

(f) Third-party deficiency reports--(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a "second-tier subcontractor") a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under paragraph (e)(6) of this clause--

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (f)(1)(i) of this clause.

(2) Subsequent payment or interest charge. As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall--

(i) Pay the amount withheld under paragraph (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) Written notice of subcontractor withholding. The Contractor shall issue a written notice of any withholding to a subcontractor (with a copy furnished to the Contracting Officer), specifying--

(1) The amount to be withheld;

(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) Subcontractor payment entitlement. The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) Prime-subcontractor disputes. A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the Government is a party. The Government may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Preservation of prime-subcontractor rights. Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) Non-recourse for prime contractor interest penalty. The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the Government for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

(l) Overpayments. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(End of clause)

52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER—CENTRAL CONTRACTOR REGISTRATION (OCT 2003)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT), except as provided in paragraph (a)(2) of this clause. As used in this clause, the term "EFT" refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend the payment due date until such time as the Government can make payment by EFT (but see paragraph (d) of this clause).

(b) Contractor's EFT information. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR) database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. If the Contractor's EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for

the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

- (i) Making a correct payment;
- (ii) Paying any prompt payment penalty due; and
- (iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

(f) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(g) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall register separately in the CCR database and shall be paid by EFT in accordance with the terms of this clause. Notwithstanding any other requirement of this contract, payment to an ultimate recipient other than the Contractor, or a financial institution properly recognized under an assignment of claims pursuant to subpart 32.8, is not permitted. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(h) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information made by the Contractor's financial agent.

(i) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.

(End of Clause)

52.232-5000 PAYMENT FOR MATERIALS DELIVERED OFF-SITE (MAR 1995)--EFARS

(a) Pursuant to FAR clause 52.232-5, Payments Under Fixed Priced Construction Contracts, materials delivered to the contractor at locations other than the site of the work may be taken into consideration in making payments if included in payment estimates and if all the conditions of the General Provisions are fulfilled. Payment for items delivered to locations other than the work site will be limited to: (1) materials required by the technical provisions; or (3) materials that have been fabricated to the point where they are identifiable to an item of work required under this contract.

(b) Such payment will be made only after receipt of paid or receipted invoices or invoices with canceled check showing title to the items in the prime contractor and including the value of material and labor incorporated into the item. In addition to petroleum products, payment for materials delivered off-site is limited to the following items: _____

(End of clause)

52.233-1 DISPUTES. (JUL 2002)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) Claim, as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) The contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim -

(A) Exceeding \$100,000; or

(B) Regardless of the amount claimed, when using -

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative dispute resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in (FAR) 48 CFR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

(End of clause)

52.233-3 PROTEST AFTER AWARD (AUG. 1996)

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery

schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

- (1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and
- (2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.
- (c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.
- (d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.
- (e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.
- (f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

(End of clause)

52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

As prescribed in 36.502, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The Contracting Officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

- (a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of
 - (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or
 - (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.
- (b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing

accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

(End of clause)

52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to

(1) conditions bearing upon transportation, disposal, handling, and storage of materials;

(2) the availability of labor, water, electric power, and roads;

(3) uncertainties of weather, river stages, tides, or similar physical conditions at the site;

(4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

(End of clause)

52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

(End of clause)

52.236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

(End of clause)

52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

(End of clause)

52.236-8 OTHER CONTRACTS (APR 1984)

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.

(End of clause)

52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities

(1) at or near the work site, and

(2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(End of clause)

52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)

(a) The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.

(b) Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

(c) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

(End of clause)

52.236-11 USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)

(a) The Government shall have the right to take possession of or use any completed or partially completed part of

the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

(End of clause)

52.236-12 CLEANING UP (APR 1984)

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

(End of clause)

52.236-13 ACCIDENT PREVENTION (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will

(1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;

(2) avoid interruptions of Government operations and delays in project completion dates; and

(3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-

(1) Provide appropriate safety barricades, signs, and signal lights;

(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(viii) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(End of clause)

52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

(End of clause)

52.236-17 LAYOUT OF WORK (APR 1984)

The Contractor shall lay out its work from Government established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay

out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

(End of clause)

52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997)

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by," or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown," "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed".

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements, and (2) the installation (i.e., fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is

minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the Contracting Officer and one set will be returned to the Contractor.

(End of clause)

52.236-26 PRECONSTRUCTION CONFERENCE (FEB 1995)

If the Contracting Officer decides to conduct a preconstruction conference, the successful offeror will be notified and will be required to attend. The Contracting Officer's notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, and information regarding the items to be discussed.

(End of clause)

52.242-13 BANKRUPTCY (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

(End of clause)

52.242-14 SUSPENSION OF WORK (APR 1984)

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract. (c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and

(2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

(End of clause)

52.243-4 CHANGES (AUG 1987)

(a) The Contracting Officer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes--

- (1) In the specifications (including drawings and designs);
- (2) In the method or manner of performance of the work;
- (3) In the Government-furnished facilities, equipment, materials, services, or site; or
- (4) Directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating

- (1) the date, circumstances, and source of the order and
- (2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after

(1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general nature and amount of the proposal, unless this period is extended by the Government. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

(End of clause)

52.243-5 CHANGES AND CHANGED CONDITIONS (APR 1984)

- (a) The Contracting Officer may, in writing, order changes in the drawings and specifications within the general scope of the contract.
 - (b) The Contractor shall promptly notify the Contracting Officer, in writing, of subsurface or latent physical conditions differing materially from those indicated in this contract or unknown unusual physical conditions at the site before proceeding with the work.
 - (c) If changes under paragraph (a) or conditions under paragraph (b) increase or decrease the cost of, or time required for performing the work, the Contracting Officer shall make an equitable adjustment (see paragraph (d)) upon submittal of a "proposal for adjustment" (hereafter referred to as proposal) by the Contractor before final payment under the contract.
 - (d) The Contracting Officer shall not make an equitable adjustment under paragraph (b) unless--
 - (1) The Contractor has submitted and the Contracting Officer has received the required written notice; or
 - (2) The Contracting Officer waives the requirement for the written notice.
 - (e) Failure to agree to any adjustment shall be a dispute under the Disputes clause.
- (End of clause)

52.244-2 SUBCONTRACTS (AUG 1998)

- (a) Definitions. As used in this clause--

Approved purchasing system means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR).

Consent to subcontract means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

Subcontract means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

- (b) This clause does not apply to subcontracts for special test equipment when the contract contains the clause at FAR 52.245-18, Special Test Equipment.
- (c) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (d) or (e) of this clause.
- (d) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--
 - (1) Is of the cost-reimbursement, time-and-materials, or labor-hour type; or

(2) Is fixed-price and exceeds--

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(e) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

(f)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (c), (d), or (e) of this clause, including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

(vii) A negotiation memorandum reflecting--

(A) The principal elements of the subcontract price negotiations;

(B) The most significant considerations controlling establishment of initial or revised prices;

(C) The reason cost or pricing data were or were not required;

(D) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;

(E) The extent to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;

(F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and

(G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

(2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (c), (d), or (e) of this clause.

(g) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--

(1) Of the acceptability of any subcontract terms or conditions;

(2) Of the allowability of any cost under this contract; or

(3) To relieve the Contractor of any responsibility for performing this contract.

(h) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404-4(c)(4)(i).

(i) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(j) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

(k) Paragraphs (d) and (f) of this clause do not apply to the following subcontracts, which were evaluated during negotiations:

(End of clause)

52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (APR 2003)

(a) Definitions.

"Commercial item", has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract", includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c) (1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (OCT 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212(a)).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (APR 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631) (flow down required in accordance with paragraph (d) of FAR clause 52.247-64).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

(End of clause)

52.245-1 PROPERTY RECORDS (APR 1984)

The Government shall maintain the Government's official property records in connection with Government property under this contract. The Government Property clause is hereby modified by deleting the requirement for the Contractor to maintain such records.

(End of clause)

52.245-2 GOVERNMENT PROPERTY (FIXED-PRICE CONTRACTS) (Dec 1989) ALTERNATE I (DEVIATION) (APR 1984).

(a) *Government-furnished property.*

(1) The Government shall deliver to the Contractor, for use in connection with and under the terms of this contract, the Government-furnished property described in the Schedule or specifications together with any related data and information that the Contractor may request and is reasonably required for the intended use of the property (hereinafter referred to as "Government-furnished property").

(2) The delivery or performance dates for this contract are based upon the expectation that Government-furnished property suitable for use (except for property furnished "as is") will be delivered to the Contractor at the times stated in the Schedule or, if not so stated, in sufficient time to enable the Contractor to meet the contract's delivery or performance dates.

(3) If Government-furnished property is received by the Contractor in a condition not suitable for the intended use, the Contractor shall, upon receipt of it, notify the Contracting Officer, detailing the facts, and, as directed by the Contracting Officer and at Government expense, either repair, modify, return, or otherwise dispose of the property. After completing the directed action and upon written request of the Contractor, the Contracting Officer shall make an equitable adjustment as provided in paragraph (h) of this clause.

(4) If Government-furnished property is not delivered to the Contractor by the required time, the Contracting Officer shall, upon the Contractor's timely written request, make a determination of the delay, if any, caused the Contractor and shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(b) Changes in Government-furnished property.

(1) The Contracting Officer may, by written notice,

(i) decrease the Government-furnished property provided or to be provided under this contract, or

(ii) substitute other Government-furnished property for the property to be provided by the Government, or to be acquired by the Contractor for the Government, under this contract.

The Contractor shall promptly take such action as the Contracting Officer may direct regarding the removal, shipment, or disposal of the property covered by such notice.

(2) Upon the Contractor's written request, the Contracting Officer shall make an equitable adjustment to the contract in accordance with paragraph (h) of this clause, if the Government has agreed in the Schedule to make the property available for performing this contract and there is any --

(i) Decrease or substitution in this property pursuant to subparagraph (b)(1) of this clause; or

(ii) Withdrawal of authority to use this property, if provided under any other contract or lease.

(c) Title in Government property.

(1) The Government shall retain title to all Government-furnished property.

(2) All Government-furnished property and all property acquired by the Contractor, title to which vests in the Government under this paragraph (collectively referred to as "Government property"), are subject to the provisions of this clause. However, special tooling accountable to this contract is subject to the provisions of the Special Tooling clause and is not subject to the provisions of this clause. Title to Government property shall not be affected by its incorporation into or attachment to any property not owned by the Government, nor shall Government property become a fixture or lose its identity as personal property by being attached to any real property.

(3) Title to each item of facilities and special test equipment acquired by the Contractor for the Government under this contract shall pass to and vest in the Government when its use in performing this contract commences or when the Government has paid for it, whichever is earlier, whether or not title previously vested in the Government.

(4) If this contract contains a provision directing the Contractor to purchase material for which the Government will reimburse the Contractor as a direct item of cost under this contract --

(i) Title to material purchased from a vendor shall pass to and vest in the Government upon the vendor's delivery of such material; and

(ii) Title to all other material shall pass to and vest in the Government upon --

(A) Issuance of the material for use in contract performance;

(B) Commencement of processing of the material or its use in contract performance; or

(C) Reimbursement of the cost of the material by the Government, whichever occurs first.

(d) *Use of Government property.* The Government property shall be used only for performing this contract, unless otherwise provided in this contract or approved by the Contracting Officer.

(e) Property administration.

(1) The Contractor shall be responsible and accountable for all Government property provided under this contract and shall comply with Federal Acquisition Regulation (FAR) Subpart 45.5, as in effect on the date of this contract.

(2) The Contractor shall establish and maintain a program for the use, maintenance, repair, protection, and preservation of Government property in accordance with sound industrial practice and the applicable provisions of Subpart 45.5 of the FAR.

(3) If damage occurs to Government property, the risk of which has been assumed by the Government under this contract, the Government shall replace the items or the Contractor shall make such repairs as the Government directs. However, if the Contractor cannot effect such repairs within the time required, the Contractor shall dispose of the property as directed by the Contracting Officer. When any property for which the Government is responsible is replaced or repaired, the Contracting Officer shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(4) The Contractor represents that the contract price does not include any amount for repairs or replacement for which the Government is responsible. Repair or replacement of property for which the Contractor is responsible shall be accomplished by the Contractor at its own expense.

(f) *Access.* The Government and all its designees shall have access at all reasonable times to the premises in which any Government property is located for the purpose of inspecting the Government property.

(g) *Limited risk of loss.* (1) The term "Contractor's managerial personnel," as used in this paragraph (g), means the Contractor's directors, officers, and any of the Contractor's managers, superintendents, or equivalent representatives who have supervision or direction of--

(i) All or substantially all of the Contractor's business;

(ii) All or substantially all of the Contractor's operation at any one plant or separate location at which the contract is being performed; or

(iii) A separate and complete major industrial operation connected with performing this contract.

(2) The Contractor shall not be liable for loss or destruction of, or damage to, the Government property provided under this contract (or, if an educational or nonprofit organization, for expenses incidental to such loss, destruction, or damage), except as provided in subparagraphs (3) and (4) below.

(3) The Contractor shall be responsible for loss or destruction of, or damage to, the Government property provided under this contract (including expenses incidental to such loss, destruction, or damage)--

(i) That results from a risk expressly required to be insured under this contract, but only to the extent of the insurance required to be purchased and maintained, or to the extent of insurance actually purchased and maintained, whichever is greater;

(ii) That results from a risk that is in fact covered by insurance or for which the Contractor is otherwise reimbursed, but only to the extent of such insurance or reimbursement;

(iii) For which the Contractor is otherwise responsible under the express terms of this contract;

(iv) That results from willful misconduct or lack of good faith on the part of the Contractor's managerial personnel; or

(v) That results from a failure on the part of the Contractor, due to willful misconduct or lack of good faith on the part of the Contractor's managerial personnel, to establish and administer a program or system for the control, use, protection, preservation, maintenance, and repair of Government property as required by paragraph (e) of this clause.

(4)(i) If the Contractor fails to act as provided in subdivision (g)(3)(v) above, after being notified (by certified mail addressed to one of the Contractor's managerial personnel) of the Government's disapproval, withdrawal of approval, or nonacceptance of the system or program, it shall be conclusively presumed that such failure was due to willful misconduct or lack of good faith on the part of the Contractor's managerial personnel.

(ii) In such event, any loss or destruction of, or damage to, the Government property shall be presumed to have resulted from such failure unless the Contractor can establish by clear and convincing evidence that such loss, destruction, or damage--

(A) Did not result from the Contractor's failure to maintain an approved program or system; or

(B) Occurred while an approved program or system was maintained by the Contractor.

(5) If the Contractor transfers Government property to the possession and control of a subcontractor, the transfer shall not affect the liability of the Contractor for loss or destruction of, or damage to, the property as set forth above. However, the Contractor shall require the subcontractor to assume the risk of, and be responsible for, any loss or destruction of, or damage to, the property while in the subcontractor's possession or control, except to the extent that the subcontract, with the advance approval of the Contracting Officer, relieves the subcontractor from such liability. In the absence of such approval, the subcontract shall contain appropriate provisions requiring the return of all Government property in as good condition as when received, except for reasonable wear and tear or for its use in accordance with the provisions of the prime contract.

Para (6) for DoD:

(6) The contractor shall notify the contracting officer upon loss or destruction of, or damage to, Government property provided under this contract, with the exception of low value property for which loss, damage, or destruction is reported at contract termination, completion, or when needed for continued contract performance. The Contractor shall take all reasonable action to protect the Government property from further damage, separate the damaged and undamaged Government property, put all the affected Government property in the best possible order, and furnish to the Contracting Officer a statement of--

(i) The lost, destroyed, or damaged Government property;

(ii) The time and origin of the loss, destruction, or damage;

(iii) All known interests in commingled property of which the Government property is a part; and

- (iv) The insurance, if any, covering any part of or interest in such commingled property.
- (7) The Contractor shall repair, renovate, and take such other action with respect to damaged Government property as the Contracting Officer directs. If the Government property is destroyed or damaged beyond practical repair, or is damaged and so commingled or combined with property of others (including the Contractor's) that separation is impractical, the Contractor may, with the approval of and subject to any conditions imposed by the Contracting Officer, sell such property for the account of the Government. Such sales may be made in order to minimize the loss to the Government, permit the resumption of business, or to accomplish a similar purpose. The Contractor shall be entitled to an equitable adjustment in the contract price for the expenditures made in performing the obligations under this subparagraph (g)(7) in accordance with paragraph (h) of this clause. However, the Government may directly reimburse the loss and salvage organization for any of their charges. The Contracting Officer shall give due regard to the Contractor's liability under this paragraph (g) when making such equitable adjustment.
- (8) The Contractor represents that it is not including in the price and agrees it will not hereafter include in any price to the Government any charge or reserve for insurance (including any self-insurance fund or reserve) covering loss or destruction of, or damage to, Government property, except to the extent that the Government may have expressly required the Contractor to carry such insurance under another provision of this contract.
- (9) In the event the Contractor is reimbursed or otherwise compensated for any loss or destruction of, or damage to, Government property, the Contractor shall use the proceeds to repair, renovate, or replace the lost, destroyed, or damaged Government property or shall otherwise credit the proceeds to or equitably reimburse the Government, as directed by the Contracting Officer.
- (10) The Contractor shall do nothing to prejudice the Government's rights to recover against third parties for any loss or destruction of, or damage to, Government property. Upon the request of the Contracting Officer, the Contractor shall, at the Government's expense, furnish to the Government all reasonable assistance and cooperation (including the prosecution of suit and the execution of instruments of assignment in favor of the Government) in obtaining recovery. In addition, where a subcontractor has not been relieved from liability for any loss or destruction of, or damage to, Government property, the Contractor shall enforce for the benefit of the Government the liability of the subcontractor for such loss, destruction, or damage.

52.246-1 CONTRACTOR INSPECTION REQUIREMENTS (APR 1984)

The Contractor is responsible for performing or having performed all inspections and tests necessary to substantiate that the supplies or services furnished under this contract conform to contract requirements, including any applicable technical requirements for specified manufacturers' parts. This clause takes precedence over any Government inspection and testing required in the contract's specifications, except for specialized inspections or tests specified to be performed solely by the Government.

(End of clause)

52.246-12 INSPECTION OF CONSTRUCTION (AUG 1996)

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all

reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

(1) Relieve the Contractor of responsibility for providing adequate quality control measures;

(2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) of this section.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

(End of clause)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

(End of clause)

(a) The term "f.o.b. destination," as used in this clause, means--

(1) Free of expense to the Government, on board the carrier's conveyance, at a specified delivery point where the consignee's facility (plant, warehouse, store, lot, or other location to which shipment can be made) is located; and

(2) Supplies shall be delivered to the destination consignee's wharf (if destination is a port city and supplies are for export), warehouse unloading platform, or receiving dock, at the expense of the Contractor. The Government shall not be liable for any delivery, storage, demurrage, accessorial, or other charges involved before the actual delivery (or "constructive placement" as defined in carrier tariffs) of the supplies to the destination, unless such charges are caused by an act or order of the Government acting in its contractual capacity. If rail carrier is used, supplies shall be delivered to the specified unloading platform of the consignee. If motor carrier (including "piggyback") is used, supplies shall be delivered to truck tailgate at the unloading platform of the consignee, except when the supplies delivered meet the requirements of Item 568 of the National Motor Freight Classification for "heavy or bulky freight." When supplies meeting the requirements of the referenced Item 568 are delivered, unloading (including movement to the tailgate) shall be performed by the consignee, with assistance from the truck driver, if requested. If the contractor uses rail carrier or freight forwarded for less than carload shipments, the contractor shall ensure that the carrier will furnish tailgate delivery, when required, if transfer to truck is required to complete delivery to consignee.

(b) The Contractor shall--

(1)(i) Pack and mark the shipment to comply with contract specifications; or

(ii) In the absence of specifications, prepare the shipment in conformance with carrier requirements;

(2) Prepare and distribute commercial bills of lading;

(3) Deliver the shipment in good order and condition to the point of delivery specified in the contract;

(4) Be responsible for any loss of and/or damage to the goods occurring before receipt of the shipment by the consignee at the delivery point specified in the contract;

(5) Furnish a delivery schedule and designate the mode of delivering carrier; and

(6) Pay and bear all charges to the specified point of delivery.

(End of clause)

52.248-3 VALUE ENGINEERING--CONSTRUCTION (FEB 2000)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any instant contract savings realized from accepted VECP's, in accordance with paragraph (f) below.

(b) Definitions. "Collateral costs," as used in this clause, means agency costs of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistic support. The term does not include the normal administrative costs of processing the VECP.

"Instant contract savings," as used in this clause, means the estimated reduction in Contractor cost of performance resulting from acceptance of the VECP, minus allowable Contractor's development and implementation costs, including subcontractors' development and implementation costs (see paragraph (h) below).

"Value engineering change proposal (VECP)" means a proposal that--

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the contract price or estimated cost without impairing essential functions or characteristics; provided, that it does not involve a change--

(i) In deliverable end item quantities only; or

(ii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (7) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) A separate, detailed cost estimate for

(i) the affected portions of the existing contract requirement and

(ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) below.

(4) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(5) A prediction of any effects the proposed change would have on collateral costs to the agency.

(6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Resident Engineer at the worksite, with a copy to the Contracting Officer.

(e) Government action.

(1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause. The Contracting Officer may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing.

(1) Rates. The Government's share of savings is determined by subtracting Government costs from instant contract savings and multiplying the result by

(i) 45 percent for fixed-price contracts or

(ii) 75 percent for cost-reimbursement contracts.

(2) Payment. Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a modification to this contract to--

(i) Accept the VECP;

(ii) Reduce the contract price or estimated cost by the amount of instant contract savings; and

(iii) Provide the Contractor's share of savings by adding the amount calculated to the contract price or fee.

(g) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount by 20 percent of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price or estimated cost, at the time the VECP is accepted, or \$100,000, whichever is greater. The Contracting Officer is the sole determiner of the amount of collateral savings.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$50,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall

include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

(i) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering-- Construction clause of contract, shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations." If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SEP 1996) - ALTERNATE I (SEP 1996)

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

(b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

(1) Stop work as specified in the notice.

(2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.

(3) Terminate all subcontracts to the extent they relate to the work terminated.

(4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.

(5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.

(6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.

(7) Complete performance of the work not terminated.

(8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.

(9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b)(6) of this clause; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.

(d) After expiration of the plant clearance period as defined in Subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid or remaining to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (g) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be modified, and the Contractor paid the agreed amount. Paragraph (g) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and Contracting Officer fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under paragraph (f) of this clause:

(1) For contract work performed before the effective date of termination, the total (without duplication of any items) of--

(i) The cost of this work;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(1)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(1)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(2) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal or request for equitable adjustment within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.

(k) In arriving at the amount due the Contractor under this clause, there shall be deducted--

(1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and

(3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.

(l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.

(m)(1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

(End of clause)

52.249-10 DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if--

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include

(i) acts of God or of the public enemy,

(ii) acts of the Government in either its sovereign or contractual capacity,

(iii) acts of another Contractor in the performance of a contract with the Government,

(iv) fires,

(v) floods,

(vi) epidemics,

(vii) quarantine restrictions,

(viii) strikes,

(ix) freight embargoes,

(x) unusually severe weather, or delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(End of clause)

52.253-1 COMPUTER GENERATED FORMS (JAN 1991)

(a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.

(b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.

(ix) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

(End of clause)

252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

(a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

252.203-7001 PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES (MAR 1999)

(a) Definitions. As used in this clause—

(1) "Arising out of a contract with the DoD" means any act in connection with—

(i) Attempting to obtain;

(ii) Obtaining, or

(iii) Performing a contract or first-tier subcontract of any agency, department, or component of the Department of Defense (DoD).

(2) "Conviction of fraud or any other felony" means any conviction for fraud or a felony in violation of state or Federal criminal statutes, whether entered on a verdict or plea, including a plea of *nolo contendere*, for which sentence has been imposed.

(3) "Date of conviction" means the date judgment was entered against the individual.

(b) Any individual who is convicted after September 29, 1988, of fraud or any other felony arising out of a contract with the DoD is prohibited from serving--

(1) In a management or supervisory capacity on any DoD contract or first-tier subcontract;

(2) On the board of directors of any DoD contractor or first-tier subcontractor;

(3) As a consultant, agent, or representative for any DoD contractor or first-tier subcontractor; or

(4) In any other capacity with the authority to influence, advise, or control the decisions of any DoD contractor or subcontractor with regard to any DoD contract or first-tier subcontract.

(c) Unless waived, the prohibition in paragraph (b) of this clause applies for not less than 5 years from the date of conviction.

(d) 10 U.S.C. 2408 provides that a defense contractor or first-tier subcontractor shall be subject to a criminal penalty of not more than \$500,000 if convicted of knowingly—

(1) Employing a person under a prohibition specified in paragraph (b) of this clause; or

(2) Allowing such a person to serve on the board of directors of the contractor or first-tier subcontractor.

(e) In addition to the criminal penalties contained in 10 U.S.C. 2408, the Government may consider other available remedies, such as—

- (1) Suspension or debarment;
- (2) Cancellation of the contract at no cost to the Government; or
- (3) Termination of the contract for default.

(f) The Contractor may submit written requests for waiver of the prohibition in paragraph (b) of this clause to the Contracting Officer. Requests shall clearly identify—

- (1) The person involved;
- (2) The nature of the conviction and resultant sentence or punishment imposed;
- (3) The reasons for the requested waiver; and
- (4) An explanation of why a waiver is in the interest of national security.

(g) The Contractor agrees to include the substance of this clause, appropriately modified to reflect the identity and relationship of the parties, in all first-tier subcontracts exceeding the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation, except those for commercial items or components.

(h) Pursuant to 10 U.S.C. 2408(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone (202) 616-3507.

(End of clause)

252.203-7002 DISPLAY OF DOD HOTLINE POSTER (DEC 1991)

(a) The Contractor shall display prominently in common work areas within business segments performing work under Department of Defense (DoD) contracts, DoD Hotline Posters prepared by the DoD Office of the Inspector General.

(b) DoD Hotline Posters may be obtained from the DoD Inspector General, ATTN: Defense Hotline, 400 Army Navy Drive, Washington, DC 22202-2884.

(x) The Contractor need not comply with paragraph (a) of this clause if it has established a mechanism, such as a hotline, by which employees may report suspected instances of improper conduct, and instructions that encourage employees to make such reports.

(End of clause)

252.204-7000 DISCLOSURE OF INFORMATION (DEC 1991)

(a) The Contractor shall not release to anyone outside the Contractor's organization any unclassified information, regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless--

(1) The Contracting Officer has given prior written approval; or

(2) The information is otherwise in the public domain before the date of release.

(b) Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least 45 days before the proposed date for release.

(c) The Contractor agrees to include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.

(End of clause)

252.209-7000 ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ONSITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY (NOV 1995)

(a) The Contractor shall not deny consideration for a subcontract award under this contract to a potential subcontractor subject to on-site inspection under the INF Treaty, or a similar treaty, solely or in part because of the actual or potential presence of Soviet inspectors at the subcontractor's facility, unless the decision is approved by the Contracting Officer.

(b) The Contractor shall incorporate this clause, including this paragraph (b), in all solicitations and contracts exceeding the simplified acquisition threshold in part 13 of the Federal Acquisition Regulation, except those for commercial items.

(End of clause)

252.209-7004 SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) Unless the Government determines that there is a compelling reason to do so, the Contractor shall not enter into any subcontract in excess of \$25,000 with a firm, or subsidiary of a firm, that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country.

(b) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country. The notice must include the name of the proposed subcontractor notwithstanding its inclusion on the List of Parties Excluded From Federal Procurement and Nonprocurement Programs.

(End of clause)

252.219-7003 SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS
SUBCONTRACTING PLAN (DOD CONTRACTS) (APR. 1996)

This clause supplements the Federal Acquisition Regulation 52.219-9, Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan, clause of this contract.

(a) *Definitions. Historically black colleges and universities*, as used in this clause, means institutions determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. The term also means any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

Minority institutions, as used in this clause, means institutions meeting the requirements of section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)). The term also includes Hispanic-serving institutions as defined in section 316(b)(1) of such Act (20 U.S.C. 1059c(b)(1)).

(b) Except for company or division-wide commercial items subcontracting plans, the term *small disadvantaged business*, when used in the FAR 52.219-9 clause, includes historically black colleges and universities and minority institutions, in addition to small disadvantaged business concerns.

(c) Work under the contract or its subcontracts shall be credited toward meeting the small disadvantaged business concern goal required by paragraph (d) of the FAR 52.219-9 clause when:

(1) It is performed on Indian lands or in joint venture with an Indian tribe or a tribally-owned corporation, and

(2) It meets the requirements of 10 U.S.C. 2323a.

(d) Subcontracts awarded to workshops approved by the Committee for Purchase from People Who are Blind or Severely Disabled (41 U.S.C. 46-48), may be counted toward the Contractor's small business subcontracting goal.

(e) A mentor firm, under the Pilot Mentor-Protege Program established under Section 831 of Pub. L. 101-510, as amended, may count toward its small disadvantaged business goal, subcontracts awarded--

(f) The master plan approval referred to in paragraph (f) of the FAR 52.219-9 clause is approval by the Contractor's cognizant contract administration activity.

(g) In those subcontracting plans which specifically identify small, small disadvantaged, and women-owned small businesses, the Contractor shall notify the Administrative Contracting Officer of any substitutions of firms that are not small, small disadvantaged, or women-owned small businesses for the firms listed in the subcontracting plan. Notifications shall be in writing and shall occur within a reasonable period of time after award of the subcontract. Contractor-specified formats shall be acceptable.

(End of clause)

252.223-7004 DRUG-FREE WORK FORCE (SEP 1988)

(a) Definitions.

(1) "Employee in a sensitive position," as used in this clause, means an employee who has been granted access to classified information; or employees in other positions that the Contractor determines involve national security; health or safety, or functions other than the foregoing requiring a high degree of trust and confidence.

(2) "Illegal drugs," as used in this clause, means controlled substances included in Schedules I and II, as defined by section 802(6) of title 21 of the United States Code, the possession of which is unlawful under chapter 13 of that Title. The term "illegal drugs" does not mean the use of a controlled substance pursuant to a valid prescription or other uses authorized by law.

(b) The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force. While this clause defines criteria for such a program, contractors are encouraged to implement alternative approaches comparable to the criteria in paragraph (c) that are designed to achieve the objectives of this clause.

(c) Contractor programs shall include the following, or appropriate alternatives:

(1) Employee assistance programs emphasizing high level direction, education, counseling, rehabilitation, and coordination with available community resources;

(2) Supervisory training to assist in identifying and addressing illegal drug use by Contractor employees;

(3) Provision for self-referrals as well as supervisory referrals to treatment with maximum respect for individual confidentiality consistent with safety and security issues;

(4) Provision for identifying illegal drug users, including testing on a controlled and carefully monitored basis. Employee drug testing programs shall be established taking account of the following:

(i) The Contractor shall establish a program that provides for testing for the use of illegal drugs by employees in sensitive positions. The extent of and criteria for such testing shall be determined by the Contractor based on considerations that include the nature of the work being performed under the contract, the employee's duties, and efficient use of Contractor resources, and the risks to health, safety, or national security that could result from the failure of an employee adequately to discharge his or her position.

(ii) In addition, the Contractor may establish a program for employee drug testing--

(A) When there is a reasonable suspicion that an employee uses illegal drugs; or

(B) When an employee has been involved in an accident or unsafe practice;

(C) As part of or as a follow-up to counseling or rehabilitation for illegal drug use;

(D) As part of a voluntary employee drug testing program.

(iii) The Contractor may establish a program to test applicants for employment for illegal drug use.

(iv) For the purpose of administering this clause, testing for illegal drugs may be limited to those substances for which testing is prescribed by section 2.1 of subpart B of the "Mandatory Guidelines for Federal Workplace Drug Testing Programs" (53 FR 11980 (April 11, 1988), issued by the Department of Health and Human Services.

(d) Contractors shall adopt appropriate personnel procedures to deal with employees who are found to be using drugs illegally. Contractors shall not allow any employee to remain on duty or perform in a sensitive position who is found to use illegal drugs until such times as the Contractor, in accordance with procedures established by the Contractor, determines that the employee may perform in such a position.

(e) The provisions of this clause pertaining to drug testing program shall not apply to the extent that are inconsistent with state or local law, or with an existing collective bargaining agreement; provided that with respect to the latter, the Contractor agrees those issues that are in conflict will be a subject of negotiation at the next collective bargaining session.

(End of clause)

252.223-7006 PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS (APR 1993)

(a) "Definitions".

As used in this clause --

(1) "Storage" means a non-transitory, semi-permanent or permanent holding, placement, or leaving of material. It does not include a temporary accumulation of a limited quantity of a material used in or a waste generated or resulting from authorized activities, such as servicing, maintenance, or repair of Department of Defense (DoD) items, equipment, or facilities.

(2) "Toxic or hazardous materials" means:

(i) Materials referred to in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 U.S.C. 9601(14)) and materials designated under section 102 of CERCLA (42 U.S.C. 9602) (40 CFR part 302);

(ii) Materials that are of an explosive, flammable, or pyrotechnic nature; or

(iii) Materials otherwise identified by the Secretary of Defense as specified in DoD regulations.

(b) In accordance with 10 U.S.C. 2692, the Contractor is prohibited from storing or disposing of non-DoD-owned toxic or hazardous materials on a DoD installation, except to the extent authorized by a statutory exception to 10 U.S.C. 2692 or as authorized by the Secretary of Defense or his designee.

(End of clause)

252.226-7001 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES, AND HAWAIIAN SMALL BUSINESS CONCERNS (OCT 2003)

(a) Definitions. As used in this clause--

Indian means any person who is a member of any Indian tribe, band, group, pueblo, or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any "Native" as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

Indian organization means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C. chapter 17.

Indian-owned economic enterprise means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitutes not less than 51 percent of the enterprise.

Indian tribe means any Indian tribe, band, group, pueblo, or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1452(c).

Interested party means a contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

Native Hawaiian small business concern means an entity that is--

(1) A small business concern as defined in section 3 of the Small Business Act (15 U.S.C. 632) and relevant implementing regulations; and

(2) Owned and controlled by a Native Hawaiian as defined in 25 U.S.C. 4221(9).

(b) The Contractor shall use its best efforts to give Indian organizations, Indian-owned economic enterprises, and Native Hawaiian small business concerns the maximum practicable opportunity to participate in the subcontracts it awards, to the fullest extent consistent with efficient performance of the contract.

(c) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern as to its eligibility, unless an interested party challenges its status or the Contracting Officer has independent reason to question that status.

(d) In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to--

(1) For matters relating to Indian organizations or Indian-owned economic enterprises: U.S. Department of the Interior, Bureau of Indian Affairs, Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street NW, MS-2626-MIB, Washington, DC 20240-4000. The BIA will determine the eligibility and will notify the Contracting Officer.

(2) For matters relating to Native Hawaiian small business concerns: Department of Hawaiian Home Lands, PO Box 1879, Honolulu, HI 96805. The Department of Hawaiian Home Lands will determine the eligibility and will notify the Contracting Officer.

(e) No incentive payment will be made--

(1) While a challenge is pending; or

(2) If a subcontractor is determined to be an ineligible participant.

(f)(1) The Contractor, on its own behalf or on behalf of a subcontractor at any tier, may request an incentive payment in accordance with this clause.

(2) The incentive amount that may be requested is 5 percent of the estimated cost, target cost, or fixed price included in the subcontract at the time of award to the Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(3) In the case of a subcontract for commercial items, the Contractor may receive an incentive payment only if the subcontracted items are produced or manufactured in whole or in part by an Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(4) The Contractor has the burden of proving the amount claimed and shall assert its request for an incentive payment prior to completion of contract performance.

(5) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the estimated cost, target cost, or fixed price included in the subcontract awarded to the Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(6) If the Contractor requests and receives an incentive payment on behalf of a subcontractor, the Contractor is obligated to pay the subcontractor the incentive amount.

(g) The Contractor shall insert the substance of this clause, including this paragraph (g), in all subcontracts exceeding \$500,000 for which further subcontracting opportunities may exist.

(End of clause)

252.227-7015 TECHNICAL DATA--COMMERCIAL ITEMS. (NOV 1995)

(a) Definitions. As used in this clause:

(1) "Commercial item" does not include commercial computer software.

(2) "Form, fit, and function data" means technical data that describes the required overall physical, functional, and performance characteristics (along with the qualification requirements, if applicable) of an item, component, or process to the extent necessary to permit identification of physically and functionally interchangeable items.

(3) The term "item" includes components or processes.

(4) "Technical data" means recorded information, regardless of the form or method of recording, of a scientific or technical nature (including computer software documentation). The term does not include computer software or data incidental to contract administration, such as financial and/or management information.

(b) License. (1) The Government shall have the unrestricted right to use, modify, reproduce, release, perform, display, or disclose technical data, and to permit others to do so, that--

(i) Have been provided to the Government or others without restrictions on use, modification, reproduction, release, or further disclosure other than a release or disclosure resulting from the sale, transfer, or other assignment of interest in the technical data to another party or the sale or transfer of some or all of a business entity or its assets to another party;

(ii) Are form, fit, and function data;

(iii) Are a correction or change to technical data furnished to the Contractor by the Government;

(iv) Are necessary for operation, maintenance, installation, or training (other than detailed manufacturing or process data); or

(v) Have been provided to the Government under a prior contract or licensing agreement through which the Government has acquired the rights to use, modify, reproduce, release, perform, display, or disclose the data without restrictions.

(2) Except as provided in paragraph (b)(1) of this clause, the Government may use, modify, reproduce, release, perform, display, or disclose technical data within the Government only. The Government shall not--

- (i) Use the technical data to manufacture additional quantities of the commercial items; or
 - (ii) Release, perform, display, disclose, or authorize use of the technical data outside the Government without the Contractor's written permission unless a release, disclosure or permitted use is necessary for emergency repair or overhaul of the commercial items furnished under this contract.
- (c) Additional license rights. The Contractor, its subcontractors, and suppliers are not required to provide the Government additional rights to use, modify, reproduce, release, perform, display, or disclose technical data. However, if the Government desires to obtain additional rights in technical data, the Contractor agrees to promptly enter into negotiations with the Contracting Officer to determine whether there are acceptable terms for transferring such rights. All technical data in which the Contractor has granted the Government additional rights shall be listed or described in a special license agreement made part of this contract. The license shall enumerate the additional rights granted the Government in such data.
- (d) Release from liability. The Contractor agrees that the Government, and other persons to whom the Government may have released or disclosed technical data delivered or otherwise furnished under this contract, shall have no liability for any release or disclosure of technical data that are not marked to indicate that such data are licensed data subject to use, modification, reproduction, release, performance, display, or disclosure restrictions.

(End of clause)

252.227-7025 LIMITATIONS ON THE USE OR DISCLOSURE OF GOVERNMENT-FURNISHED INFORMATION MARKED WITH RESTRICTIVE LEGENDS. (JUN 1995)

- (a)(1) For contracts requiring the delivery of technical data, the terms "limited rights" and "Government purpose rights" are defined in the Rights in Technical Data--Noncommercial Items clause of this contract.
 - (2) For contracts that do not require the delivery of technical data, the terms "government purpose rights" and "restricted rights" are defined in the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause of this contract.
 - (3) For Small Business Innovative Research program contracts, the terms "limited rights" and "restricted rights" are defined in the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause of this contract.
- (b) Technical data or computer software provided to the Contractor as Government furnished information (GFI) under this contract may be subject to restrictions on use, modification, reproduction, release, performance, display, or further disclosure.
- (1) GFI marked with limited or restricted rights legends. The Contractor shall use, modify, reproduce, perform, or display technical data received from the Government with limited rights legends or computer software received with restricted rights legends only in the performance of this contract. The Contractor shall not, without the express written permission of the party whose name appears in the legend, release or disclose such data or software to any person.
 - (2) GFI marked with government purpose rights legends. The Contractor shall use technical data or computer software received from the Government with government purpose rights legends for government purposes only. The Contractor shall not, without the express written permission of the party whose name appears in the restrictive legend, use, modify, reproduce, release, perform, or display such data or software for any commercial purpose or disclose such data or software to a person other than its subcontractors, suppliers, or prospective subcontractors

or suppliers, who require the data or software to submit offers for, or perform, contracts under this contract. Prior to disclosing the data or software, the Contractor shall require the persons to whom disclosure will be made to complete and sign the non-disclosure agreement at 227.7103-7 of the Defense Federal Acquisition Regulation Supplement (DFARS).

(3) GFI marked with specially negotiated license rights legends. The Contractor shall use, modify, reproduce, release, perform, or display technical data or computer software received from the Government with specially negotiated license legends only as permitted in the license. Such data or software may not be released or disclosed to other persons unless permitted by the license and, prior to release or disclosure, the intended recipient has completed the non-disclosure agreement at DFARS 227.7103-7. The Contractor shall modify paragraph (1)(c) of the non-disclosure agreement to reflect the recipient's obligations regarding use, modification, reproduction, release, performance, display, and disclosure of the data or software.

(c) Indemnification and creation of third party beneficiary rights. The Contractor agrees--

(1) To indemnify and hold harmless the Government, its agents, and employees from every claim or liability, including attorneys fees, court costs, and expenses, arising out of, or in any way related to, the misuse or unauthorized modification, reproduction, release, performance, display, or disclosure of technical data or computer software received from the Government with restrictive legends by the Contractor or any person to whom the Contractor has released or disclosed such data or software; and

(xi) That the party whose name appears on the restrictive legend, in addition to any other rights it may have, is a third party beneficiary who has the right of direct action against the Contractor, or any person to whom the Contractor has released or disclosed such data or software, for the unauthorized duplication, release, or disclosure of technical data or computer software subject to restrictive legends.

(End of clause)

252.227-7033 RIGHTS IN SHOP DRAWINGS (APR 1966)

(a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower-tier subcontractor pursuant to a construction contract, showing in detail (i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier.

252.232-7003 ELECTRONIC SUBMISSION OF PAYMENT REQUESTS (DEC 2003)

(a) Definitions. As used in this clause--

(1) Contract financing payment and invoice payment have the meanings given in section 32.001 of the Federal Acquisition Regulation.

(2) Electronic form means any automated system that transmits information electronically from the initiating system to all affected systems. Facsimile, e-mail, and scanned documents are not acceptable electronic forms for submission of payment requests. However, scanned documents are acceptable when they are part of a submission of a payment request made using one of the electronic forms provided for in paragraph (b) of this clause.

(3) Payment request means any request for contract financing payment or invoice payment submitted by the Contractor under this contract.

(b) Except as provided in paragraph (c) of this clause, the Contractor shall submit payment requests using one of the following electronic forms:

(1) Wide Area WorkFlow-Receipt and Acceptance (WAWF-RA). Information regarding WAWF-RA is available on the Internet at <https://rmb.ogden.disa.mil>.

(2) Web Invoicing System (WInS). Information regarding WInS is available on the Internet at <https://ecweb.dfas.mil>.

(3) American National Standards Institute (ANSI) X.12 electronic data interchange (EDI) formats.

(i) Information regarding EDI formats is available on the Internet at <http://www.X12.org>.

(ii) EDI implementation guides are available on the Internet at <http://www.dfas.mil/ecedi>.

(4) Another electronic form authorized by the Contracting Officer.

(c) If the Contractor is unable to submit a payment request in electronic form, or DoD is unable to receive a payment request in electronic form, the Contractor shall submit the payment request using a method mutually agreed to by the Contractor, the Contracting Officer, the contract administration office, and the payment office.

(d) In addition to the requirements of this clause, the Contractor shall meet the requirements of the appropriate payment clauses in this contract when submitting payments requests.

(End of clause)

252.236-7000 MODIFICATION PROPOSALS - PRICE BREAKDOWN. (DEC 1991)

(a) The Contractor shall furnish a price breakdown, itemized as required and within the time specified by the Contracting Officer, with any proposal for a contract modification.

(b) The price breakdown --

(1) Must include sufficient detail to permit an analysis of profit, and of all costs for --

(i) Material;

(ii) Labor;

(iii) Equipment;

(iv) Subcontracts; and

(v) Overhead; and

(2) Must cover all work involved in the modification, whether the work was deleted, added, or changed.

- (c) The Contractor shall provide similar price breakdowns to support any amounts claimed for subcontracts.
- (d) The Contractor's proposal shall include a justification for any time extension proposed.

252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR part 31 and DFARS part 231, in effect on the date of this contract, apply.

252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)

(a) The amount of any request for equitable adjustment to contract terms shall accurately reflect the contract adjustment for which the Contractor believes the Government is liable. The request shall include only costs for performing the change, and shall not include any costs that already have been reimbursed or that have been separately claimed. All indirect costs included in the request shall be properly allocable to the change in accordance with applicable acquisition regulations.

(b) In accordance with 10 U.S.C. 2410(a), any request for equitable adjustment to contract terms that exceeds the simplified acquisition threshold shall bear, at the time of submission, the following certificate executed by an individual authorized to certify the request on behalf of the Contractor:

I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief.

(Official's Name)

(Title)

(c) The certification in paragraph (b) of this clause requires full disclosure of all relevant facts, including--

(1) Cost or pricing data if required in accordance with subsection 15.403-4 of the Federal Acquisition Regulation (FAR); and

(2) Information other than cost or pricing data, in accordance with subsection 15.403-3 of the FAR, including actual cost data and data to support any estimated costs, even if cost or pricing data are not required.

(d) The certification requirement in paragraph (b) of this clause does not apply to---

(1) Requests for routine contract payments; for example, requests for payment for accepted supplies and services, routine vouchers under a cost-reimbursement type contract, or progress payment invoices; or

(2) Final adjustment under an incentive provision of the contract.

252.244-7000 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (DOD) (MAR 2000)

In addition to the clauses listed in paragraph (c) of the Subcontracts for Commercial Items and Commercial Components clause of this contract (Federal Acquisition Regulation 52.244-6), the Contractor shall include the

terms of the following clauses, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

252.225-7014 Preference for Domestic Specialty Metals, Alternate I (10 U.S.C. 2241 note).

252.247-7023 Transportation of Supplies by Sea (10 U.S.C. 2631).

252.247-7024 Notification of Transportation of Supplies by Sea (10 U.S.C. 2631).

(End of clause)

252.246-7000 MATERIAL INSPECTION AND RECEIVING REPORT (MAR 2003)

(a) At the time of each delivery of supplies or services under this contract, the Contractor shall prepare and furnish to the Government a material inspection and receiving report in the manner and to the extent required by Appendix F, Material Inspection and Receiving Report, of the Defense FAR Supplement.

(b) Contractor submission of the material inspection and receiving information required by Appendix F of the Defense FAR Supplement by using the Wide Area WorkFlow-Receipt and Acceptance (WAWF-RA) electronic form (see paragraph (b)(1) of the clause at 252.232-7003) fulfills the requirement for a material inspection and receiving report (DD Form 250).

(End of clause)

252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor --

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause; including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties--

(1) In all subcontracts under this contract, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(End of clause)

Section 00800 - Special Contract Requirements

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52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within **TEN DAYS (10)** calendar days after the date the Contractor receives the **notice to proceed (NTP)**, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than **THREE HUNDRED SIXTY (360) calendar days after issuance of the Notice to Proceed***. * The time stated for completion shall include final cleanup of the premises.

(End of clause)

52.211-12 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000)

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$410.00 for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

52.211-13 TIME EXTENSIONS (SEP 2000)

Time extensions for contract changes will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements related to the changed work and that the remaining contract completion dates for all other portions of the work will not be altered. The change order also may provide an equitable readjustment of liquidated damages under the new completion schedule.

(End of clause)

52.228-5 INSURANCE--WORK ON A GOVERNMENT INSTALLATION (JAN 1997)

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

(b) Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe, or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

(End of clause)

52.228-15 PERFORMANCE AND PAYMENT BONDS--CONSTRUCTION (JUL 2000)-

(a) Definitions. As used in this clause--

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) Amount of required bonds. Unless the resulting contract price is \$100,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) Additional bond protection. (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, NW, 2nd Floor, West Wing, Washington, DC 20227.

(e) Notice of subcontractor waiver of protection (40 U.S.C. 270b(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

52.231-5000 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE MAR 1995)--EFARS

(a) This clause does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region V. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing

data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

(End of clause)

52.232-5000 PAYMENT FOR MATERIALS DELIVERED OFF-SITE (MAR 1995)--EFARS

(a) Pursuant to FAR clause 52.232-5, Payments Under Fixed Priced Construction Contracts, materials delivered to the contractor at locations other than the site of the work may be taken into consideration in making payments if included in payment estimates and if all the conditions of the General Provisions are fulfilled. Payment for items delivered to locations other than the work site will be limited to: (1) materials required by the technical provisions; or (3) materials that have been fabricated to the point where they are identifiable to an item of work required under this contract.

(b) Such payment will be made only after receipt of paid or receipted invoices or invoices with canceled check showing title to the items in the prime contractor and including the value of material and labor incorporated into the item. In addition to petroleum products, payment for materials delivered off-site is limited to type and quantity of construction materials approved by the Contracting Officer prior to commencement of construction.

(End of clause)

52.236-1 PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984)

The Contractor shall perform on the site, and with its own organization, work equivalent to at least **twenty (20%)** percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

(End of clause)

52.236-4 PHYSICAL DATA (APR 1984)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations.

(b) Weather conditions: Each offeror should satisfy himself before submitting his proposal as to hazards likely to arise from weather conditions. Complete weather records and reports may be obtained from the local National Weather Service Office.

(c) Transportation facilities: Each offeror, before submitting his proposal, shall make an investigation of the conditions of existing public and private road and of clearance, restriction, bridge load limits, and other limitations affecting transportation and ingress and egress at the job site. The unavailability of transportation facilities shall not become a basis for claims for damages or extension of time for completion of work.

(End of clause)

252.225-7014 PREFERENCE FOR DOMESTIC SPECIALTY METALS (APR 2003)

(a) Definitions. As used in this clause--

(1) Qualifying country means any country listed in subsection 225.872-1 of the Defense Federal Acquisition Regulation Supplement.

(2) Specialty metals means--

(i) Steel--

(A) With a maximum alloy content exceeding one or more of the following limits: manganese, 1.65 percent; silicon, 0.60 percent; or copper, 0.60 percent; or

(B) Containing more than 0.25 percent of any of the following elements: aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, or vanadium;

(ii) Metal alloys consisting of nickel, iron-nickel, and cobalt base alloys containing a total of other alloying metals (except iron) in excess of 10 percent;

(iii) Titanium and titanium alloys; or

(iv) Zirconium and zirconium base alloys.

(b) Any specialty metals incorporated in articles delivered under this contract shall be melted in the United States, its possessions, or Puerto Rico.

(c) This clause does not apply to specialty metals--

(1) Melted in a qualifying country or incorporated in an article manufactured in a qualifying country; or

(2) Purchased by a subcontractor at any tier.

(End of clause)

252.225-7030 RESTRICTION ON ACQUISITION OF CARBON, ALLOY, AND ARMOR STEEL PLATE (APR 2003)

Carbon, alloy, and armor steel plate shall be melted and rolled in the United States or Canada if the carbon, alloy, or armor steel plate--

(a) Is in Federal Supply Class 9515 or is described by specifications of the American Society for Testing Materials or the American Iron and Steel Institute; and

(b) Will be delivered to the Government or will be purchased by the Contractor as a raw material for use in a Government-owned facility or a facility under the control of the Department of Defense.

(End of clause)

252.236-7001 CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS (AUG 2000)

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall--

- (1) Check all drawings furnished immediately upon receipt;
- (2) Compare all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Contracting Officer of any discrepancies;
- (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and
- (5) Reproduce and print contract drawings and specifications as needed.

(c) In general--

- (1) Large-scale drawings shall govern small-scale drawings; and
 - (2) The Contractor shall follow figures marked on drawings in preference to scale measurements.
- (d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.
- (e) The work shall conform to the specifications and the contract drawings identified on the index of drawings.

(End of clause)

WAGE RATE

General Decision Number KS030006 06/13/2003 KS6

Superseded General Decision No. KS020006

State: Kansas

Construction Type:

HEAVY
HIGHWAY

County(ies):

DOUGLAS LEAVENWORTH SHAWNEE

HEAVY CONSTRUCTION PROJECTS
HIGHWAY CONSTRUCTION PROJECTS (Excluding Jefferson County)

Modification Number Publication Date
0 06/13/2003

COUNTY(ies):

DOUGLAS LEAVENWORTH SHAWNEE

CARP0007R 04/01/2001

 Rates Fringes
LEAVENWORTH COUNTY

CARPENTERS AND PILEDRIVERMEN 25.50 6.88

CARP1445B 04/01/2001

 Rates Fringes
JEFFERSON AND SHAWNEE COUNTIES

CARPENTERS 17.20 4.35
PILEDRIVERS 17.575 4.35

CARP2279C 04/01/2001

 Rates Fringes
DOUGLAS COUNTY

CARPENTERS 17.20 4.35
PILEDRIVERS 17.575 4.35

ELEC0053E 09/01/2000

 Rates Fringes
LEAVENWORTH COUNTY (North of Fairmont,
Stranger, and Tonganoxie Townships)

LINE CONSTRUCTION:

LINEMEN 27.80 28.75%+2.20
LINEMEN OPERATOR 25.97 28.75%+2.20
GROUND MEN POWDERMEN 19.45 28.75%+2.20
GROUND MEN 18.49 28.75%+2.20

RAILROAD AND CROSS COUNTRY

TRANSMISSION LINES:

LINEMAN 24.98 28.75%+2.20
LINEMAN OPERATOR 23.10 28.75%+2.20
GROUND MAN POWDERMAN 17.25 28.75%+2.20
GROUND MAN 16.11 28.75%+2.20
POLE TREATING SPECIALIST 26.60 28.75%+2.20
POLE TREATING TRUCK DRIVER 17.25 28.75%+2.20
POLE TREATING GROUND MAN 16.11 28.75%+2.20

ELEC0124D 08/26/2002

Rates Fringes

LEAVENWORTH COUNTY (Delaware, High
Prairie and Kickapoo Townships, City
of Leavenworth and Ft. Leavenworth

Military Reservation)

ELECTRICIANS	30.73	10% + 9.30
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ELEC0226B 03/01/2001

Rates Fringes

DOUGLAS, JEFFERSON, SHAWNEE, and the
remainder of LEAVENWORTH COUNTY

ELECTRICIANS	23.60	3% + 5.08
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ELEC0304B 07/01/1998

Rates Fringes

LEAVENWORTH COUNTY (Except that
portion north of Fairmont, Stranger,
and Tonganoxie Townships) and
DOUGLAS, JEFFERSON, SHAWNEE COUNTIES

LINE CONSTRUCTION:

LINEMEN	22.76	23.75%+2.00
CABLE SPLICERS	23.90	23.75%+2.00
GROUND MEN	13.63	23.75%+2.00
POWDERMEN	18.71	23.75%+2.00
LINE TRUCK AND EQUIPMENT OPERATORS	18.71	23.75%+2.00
TRAFFIC SIGNAL TECHNICIAN	22.76	23.75%+2.00

ENGI0101C 04/01/2002

Rates Fringes

POWER EQUIPMENT OPERATORS:

DOUGLAS COUNTIES:

GROUP 1	17.80	6.87
GROUP 2	17.55	6.87
GROUP 3	17.30	6.87
GROUP 4	16.95	6.87
GROUP 4A	17.20	6.87

GROUP 1: Asphalt paver and spreader, Backhoe, Boring machine,
Blades, all types, Clamshell, Concrete mixer paver operator,
Concrete plant operator (automatic); Crane, Truck crane, Pitman

crane, Hydro crane or any machine with power swing, Derrick or derrick trucks; Dragline operator, Dredge operator, Dozer, Ditching machine, Euclid loader, Hoist, 2 active drums, Loader, all types, Mechanic or welder, Mixermobile, Multi-unit scraper, Piledriver operator, Power shovel operator, Quad track, Scoop operator, all types, Sideboom cat, Cheery picker, Skimmer scoop operator, Push cat operators.

GROUP 2: Asphalt plant operator, Elevating grader operator.

GROUP 3: A-frame truck, Asphalt roller operator, Asphalt plant boiler fireman, Backfiller operator, Barber green loader, Boiler, other than asphalt, Bull float operator, Churn drill operator, Compressor operator (l), Concrete central plant operator, Concrete mixer operator, skip, Concrete pump operator, Crusher operator, Distributor operator, Finish machine operator, concrete, Fireman, other than asphalt, Flex plane operator, Fork lift, Form grader operator, Greaser, Hoist, 1 drum, Jeep ditching machine, Pavement Breaker, self-propelled (of the hydra hammer or similar type), pump operator, 4" or over, two, pump operator, other than Dredge screening and wash plant operator, Small machine operator, Spreader box operator, self-propelled, Tractor operator, over 50 h.p., Self-propelled roller operator, other than asphalt siphons and jets, Subgrading machine operator, Tank car heater operator, Combination booster and boilers, Towboat operator, Vibrating machine operator, not hand.

GROUP 4: Concrete gang saw, Self-propelled (con-cut), Conveyor operator, Harrow, disc. seeder, Oiler, Tractor operator, 50 h.p. or less without attachments.

GROUP 4A: Oiler, Motor crane.

HOURLY PREMIUMS: Following classifications shall receive (\$.25) above Group I rate: Clamshells - 3 yd. capacity or over, Crane or rigs, 80 ft. of boom or over (including jib), Draglines, 3 yd. capacity or over, Piledrivers 80 ft of boom or over (including jib), Shovels and backhoes, 3 yd. capacity or over.

ENGI0101F 04/01/2002

Rates Fringes
LEAVENWORTH COUNTY

POWER EQUIPMENT OPERATORS:
ALL OTHER WORK

GROUP 1	23.79	8.97	
GROUP 2	22.75	8.97	
GROUP 3			
OILERS	18.28	8.97	
OILERS DRIVER (ALL TYPES)	21.63	8.97	

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1 - Asphalt roller operator, finish, asphalt paver and spreader, asphalt plant operator, concrete plant operator, la tourneau rooter (all tiller types), concrete mixer paver, slip form paver operator (CMI, Rex, Gomeco or equal), finishing machine operator, auto grader or trimmer or sub-grader, side discharge spreader, concrete pump operator, backhoe, blade operator (all types), bulldozer operator, high loader - fork lift - skid loader (all types), quad track, scraper operator (all types), push cat, ditching machine, boilers-2, booster pump on dredge, dredge engineman, dredge operator, tow boat operator, hoisting engineer (2 active drums), crane operator, derrick or

derrick trucks, drag line operator, pile driver operator, pitman crane or boom truck (all types), shovel operator, truck crane, clamshell operator, drilling or boring machine (rotary - self propelled), boring machine (truck or crane mounted), skimmer scoop operator, mucking machine operator, sideboom cats, locomotive operator (standard gage), drillcat with compressor mounted (self-contained) or similar type self propelled rotary drill (not air tract), mechanics and welders (field and plants)

GROUP 2 - A-Frame truck operator, articulated dump truck, hoisting engine (one drum), roller operator (with or without blades), boilers (1), distributor operator, fireman gig, tank car heater operator (combination boiler and booster), chip spreader, back filler operator, farm tractor (all attachments), multiple compactor, concrete mixer operator, skip loader, elevating grader operator, pavement breaker, self propelled hydra-hammer (or similar type), power shield, churn drill operator, concrete saws (self propelled), conveyor operator, float operator, form grader operator, screening and washing plant, siphons and jets, vibrating machine operator (not hand held), crusher operator, conveyor operator, paymill operator, maintenance operator, welding machine, compressor, pumps, self-propelled street broom or sweeper, stump cutting machine, straw blower

HOURLY PREMIUMS

FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$.25) ABOVE GROUP I RATE: Clamshells - 3 yd. capacity or over - crane or rigs 80 ft. of boom or over (including jib) - draglines, 3 yd. capacity or over - piledrivers 80 ft. of boom or over (including jib) - shovels & backhoes, 3 yd. capacity or over.

ENGI0101G 04/01/1999

Rates Fringes

POWER EQUIPMENT OPERATORS:

JEFFERSON COUNTY:

GROUP 1	15.40	5.67
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GROUP 2	15.15	5.67
GROUP 3	14.90	5.67
GROUP 4	14.55	5.67
GROUP 4A	14.80	5.67

GROUP 1: Asphalt paver and spreader, Backhoe, Boring machine, Blades, all types, Clamshell, Concrete mixer paver operator, Concrete plant operator (automatic); Crane, Truck crane, Pitman crane, Hydro crane or any machine with power swing, Derrick or derrick trucks; Dragline operator, Dredge operator, Dozer, Ditching machine, Euclid loader, Hoist, 2 active drums, Loader, all types, Mechanic or welder, Mixermobile, Multi-unit scraper, Piledriver operator, Power shovel operator, Quad track, Scoop operator, all types, Sideboom cat, Cheery picker, Skimmer scoop operator, Push cat operators.

GROUP 2: Asphalt plant operator, Elevating grader operator.

GROUP 3: A-frame truck, Asphalt roller operator, Asphalt plant boiler fireman, Backfiller operator, Barber green loader, Boiler, other than asphalt, Bull float operator, Churn drill operator, Compressor operator (l), Concrete central plant operator, Concrete mixer operator, skip, Concrete pump operator, Crusher operator, Distributor operator, Finish machine operator, concrete, Fireman, other than asphalt, Flex plane operator, Fork lift, Form grader operator, Greaser, Hoist, 1 drum, Jeep ditching machine, Pavement Breaker, self-propelled (of the hydra hammer or similar type), pump operator, 4" or over, two, pump operator, other than Dredge screening and wash plant operator, Small machine operator, Spreader box operator, self-propelled, Tractor operator, over 50 h.p., Self-propelled roller operator, other than asphalt siphons and jets, Subgrading machine operator, Tank car heater operator, Combination booster and boilers, Towboat operator, Vibrating machine operator, not hand.

GROUP 4: Concrete gang saw, Self-propelled (con-cut), Conveyor operator, Harrow, disc. seeder, Oiler, Tractor operator, 50 h.p. or less without attachments.

GROUP 4A: Oiler, Motor crane.

HOURLY PREMIUMS: Following classifications shall receive (\$.25) above Group I rate: Clamshells - 3 yd. capacity or over, Crane or rigs, 80 ft. of boom or over (including jib), Draglines, 3 yd. capacity or over, Piledrivers 80 ft of boom or over (including jib), Shovels and backhoes, 3 yd. capacity or over.

ENGI9101A 04/01/2002

Rates Fringes

POWER EQUIPMENT OPERATORS:

SHAWNEE COUNTIES:

GROUP 1	17.10	6.87
GROUP 2	16.85	6.87
GROUP 3	16.60	6.87
GROUP 4	16.25	6.87
GROUP 4A	16.50	6.87

GROUP 1: Asphalt paver and spreader, Backhoe, Boring machine, Blades, all types, Clamshell, Concrete mixer paver operator, Concrete plant operator (automatic); Crane, Truck crane, Pitman crane, Hydro crane or any machine with power swing, Derrick or derrick trucks; Dragline operator, Dredge operator, Dozer, Ditching machine, Euclid loader, Hoist, 2 active drums, Loader, all types, Mechanic or welder, Mixermobile, Multi-unit scraper, Piledriver operator, Power shovel operator, Quad track, Scoop operator, all types, Sideboom cat, Cheery picker, Skimmer scoop operator, Push cat operators.

GROUP 2: Asphalt plant operator, Elevating grader operator.

GROUP 3: A-frame truck, Asphalt roller operator, Asphalt plant boiler fireman, Backfiller operator, Barber green loader, Boiler, other than asphalt, Bull float operator, Churn drill operator, Compressor operator (l), Concrete central plant operator, Concrete mixer operator, skip, Concrete pump operator, Crusher operator, Distributor operator, Finish machine operator, concrete, Fireman, other than asphalt, Flex plane operator, Fork lift, Form grader operator, Greaser, Hoist, 1 drum, Jeep ditching machine, Pavement Breaker, self-propelled (of the hydra hammer or similar type), pump operator, 4" or over, two, pump operator, other than Dredge screening and wash plant operator, Small machine operator, Spreader box operator, self-propelled, Tractor operator, over 50 h.p., Self-propelled roller operator, other than asphalt siphons and jets, Subgrading machine operator, Tank car heater operator, Combination booster and boilers, Towboat operator, Vibrating machine operator, not hand.

GROUP 4: Concrete gang saw, Self-propelled (con-cut), Conveyor operator, Harrow, disc. seeder, Oiler, Tractor operator, 50 h.p. or less without attachments.

GROUP 4A: Oiler, Motor crane.

HOURLY PREMIUMS: Following classifications shall receive (\$.25) above Group I rate: Clamshells - 3 yd. capacity or over, Crane or rigs, 80 ft. of boom or over (including jib), Draglines, 3 yd. capacity or over, Piledrivers 80 ft of boom or over (including jib), Shovels and backhoes, 3 yd. capacity or over.

IRON0010B 04/01/2001

Rates Fringes

IRONWORKERS:

LEAVENWORTH COUNTY	22.70	11.63
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IRON0010E 04/01/2001

Rates	Fringes
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IRONWORKERS:

DOUGLAS, JEFFERSON, AND

SHAWNEE COUNTIES	19.70	11.63
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LABO0142B 04/01/2001

Rates	Fringes
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LABORERS

JEFFERSON COUNTY

GROUP 1	11.80	4.15
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GROUP 2	12.05	4.15
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DOUGLAS AND SHAWNEE COUNTIES

GROUP 1	12.20	4.15
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GROUP 2	12.45	4.15
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GROUP 1: Board mat weavers & cable tiers, georgia buggy (manually operated), mixerman-no skip lift, salamander tenders, track men, tractor swamper, truck dumper, wire mesh setter, water pump up to 4 inches, and all other general laborers including flagman.

GROUP 2: Air tool operators, cement handlers (bulk), chain saw, georgia buggy (mechanically operated), grademan, hot mastic kettleman, crusher feeder, joint man, jute man, mason tender, material batch hopper and scale man, mixer man, pier hole man (working 11 feet deep), pipelayer - drainage (concrete and/or corrugated metal), signal man (crane), truck dumper - dry batch, vibrator operator, wagon and churn drill operator, asphalt raker, barco tamper, concrete saw, creosote material - handling and applying, nozzle burner (cutting torch and burning bar), conduit pipe, water and gas distribution lines, tile and duct line setter, form setter and liner on concrete paving, powderman, sandblasting and gunite nozzleman, sanitary sewer pipe layer, steel plate structure erectors, screed man.

LABO1290I 02/01/1997

Rates	Fringes
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DOUGLAS AND SHAWNEE COUNTIES

ASBESTOS AND HAZARDOUS MATERIAL

ABATEMENT WORKERS (Preparation,
removal and encapsulation of

hazardous materials from non-mechanical systems)	10.40	3.80
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LABO1290L 02/01/1997
 Rates Fringes
 LEAVENWORTH COUNTY

ASBESTOS AND HAZARDOUS MATERIAL
 ABATEMENT WORKERS (Preparation,
 removal and encapsulation of
 hazardous materials from non-mechanical systems)

	11.40	4.15
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LABO1290N 02/01/1997
 Rates Fringes
 JEFFERSON COUNTY

ASBESTOS AND HAZARDOUS MATERIAL
 ABATEMENT WORKERS (Preparation,
 removal and encapsulation of
 hazardous materials from non-mechanical systems)

	10.00	3.80
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LABO1290W 04/01/2002
 Rates Fringes
 LABORERS

LEAVENWORTH COUNTY

GROUP 1	16.05	7.24
GROUP 2	17.14	7.24

GROUP 1: Board mat weavers & cable tiers, georgia buggy (manually operated), mixerman-no skip lift, salamander tenders, track men, tractor swamper, truck dumper, wire mesh setter, water pump up to 4 inches, and all other general laborers including flagman.

GROUP 2: Air tool operators, cement handlers (bulk), chain saw, georgia buggy (mechanically operated), grademan, hot mastic kettleman, crusher feeder, joint man, jute man, mason tender, material batch hopper and scale man, mixer man, pier hole man (working 11 feet deep), pipelayer - drainage (concrete and/or corrugated metal), signal man (crane), truck dumper - dry batch, vibrator operator, wagon and churn drill operator, asphalt raker, barco tamper, concrete saw, creosote material - handling and applying, nozzle burner (cutting torch and burning bar), conduit pipe, water and gas distribution lines, tile and duct line setter, form setter and liner on concrete paving, powderman, sandblasting and gunite nozzleman, sanitary sewer pipe layer, steel plate structure erectors, screed man.

PLAS0044C 04/01/1997

Rates Fringes
CEMENT MASONS:

DOUGLAS & SHAWNEE COUNTIES 14.25 2.95

JEFFERSON COUNTY 13.65 2.95

PLAS0518C 04/01/2001

Rates Fringes
LEAVENWORTH COUNTY:

CEMENT MASONS 20.40 8.15

PLUM0165D 06/01/2001

Rates Fringes
JEFFERSON AND SHAWNEE COUNTIES

PLUMBERS 24.24 7.35

PLUM0533D 12/01/1999

Rates Fringes
LEAVENWORTH COUNTY

PIPEFITTERS 26.38 9.53

PLUM0763C 08/01/2001

Rates Fringes
DOUGLAS COUNTY

PLUMBERS AND PIPEFITTERS:

Industrial and Commercial Projects 24.63 6.80

Light Commercial Projects: (heating,
cooling and plumbing on construction
projects bid for \$50,000 or less,
but does not include industrial,
hospitals, colleges, and university
projects) 21.19 6.80

TEAM0541F 04/01/2002

Rates Fringes
LEAVENWORTH COUNTY:

GROUP 1	23.59	6.75
GROUP 2	23.08	6.75
GROUP 3	22.59	6.75

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Mechanics and welders, A-frame low boy - boom truck driver.

GROUP 2: Material trucks, Tandem two teams, Semi-trailers, Winch trucks-fork trucks, Distributor drivers and operators, Agitator and transit mix, Tank wagon drivers, Single axle, Tank wagon drivers, Tandem or semi-trailer, Isley wagons, dump trucks, Excavator, 5 cu. yds., and over, Dumpsters, Half-tracks, Speedace, Euclids and other similar excavating equipment, One team, Station wagons, Pickup truck, Material trucks, single axle, Tank wagon drivers, single axle.

GROUP 3: Oilers and Greasers.

TEAM0541J 03/25/2000

Rates Fringes

TRUCK DRIVERS:

Traffic Control Service Driver 14.15 2.44+a

a. PAID HOLIDAYS: New Year's Day, Decoration Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day, Employee's birthday and 2 personal days.

TEAM0696A 03/16/1997

Rates Fringes

DOUGLAS, JEFFERSON AND
SHAWNEE COUNTIES

TRUCK DRIVERS:

GROUP 1	10.60	2.95
GROUP 2	10.70	2.95
GROUP 3	10.85	2.95

GROUP 1: Pickups, Panel trucks, Station wagons, Flat beds, Dump and batch trucks, single axle

GROUP 2: Tandem trucks, Warehousemen or partsmen, Mechanic helpers and servicemen

GROUP 3: Lowboys, Semi-trailers, all Transit mixer truck (single or tandem Axle), A-frame and winch trucks when used as such, Euclid, end and bottom dump, Tournarockers, Atheys, Dumpsters and similar off-road equipment and mechanics on such equipment

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour

Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.
END OF GENERAL DECISION

DIVISION 1 - GENERAL REQUIREMENTS

01100	General
01310	Project Chart
01312A	Quality Control System (QCS)
01330	Submittal Procedures
01355A	Environmental Protection
01356A	Storm Water Pollution Prevention Measures
	Construction Storm Water Permit
01420	Sources for Reference Publications
01451A	Contractor Quality Control
01500A	Temporary Construction Facilities
01525	Safety and Occupational Health Requirements
01567	NPDES Permit Requirements for Storm Water Discharges from Construction Sites
01572	Construction and Demolition Waste Management
01780A	Closeout Submittals

SECTION 01100

GENERAL

PART 1 GENERAL

1.1 INQUIRIES

Pursuant to SECTION 00100 paragraph titled "Explanation to Prospective Bidders", any inquiries regarding this Invitation, before bids are opened, should be addressed to the District Engineer, Kansas City District, Corps of Engineers, 700 Federal Building, Kansas City, Missouri 64106, ATTN: Mr. Dave Werner. Inquiries for which oral explanation or advice on the plans and specifications will suffice may be referred to Mr. Werner by calling Area Code 816-983-3265. Telephone calls concerning the mailing of plans and specifications should be made to Contracting Division at Area Code 816-983-3975. Collect telephone calls will not be accepted. (KCDO APR 84)

1.2 SUPERINTENDENCE OF SUBCONTRACTORS

(a) The Contractor shall be required to furnish the following:

(1) If more than 50% and less than 70% of the value of the contract work is subcontracted, one superintendent shall be provided at the site and on the Contractor's payroll to be responsible for coordinating, directing, inspecting and expediting the subcontract work.

(2) If 70% or more of the value of the work is subcontracted, the Contractor shall be required to furnish two such superintendents to be responsible for coordinating, directing, inspecting and expediting the subcontract work.

(b) If the Contracting Officer, at any time after 50% of the subcontracted work has been completed, finds that satisfactory progress is being made, he may waive all or part of the above requirement for additional superintendence subject to the right of the Contracting Officer to reinstate such requirement if at any time during the progress of the remaining work he finds that satisfactory progress is not being made.

1.3 IDENTIFICATION OF EMPLOYEES

The Contractor shall be responsible for furnishing to each employee and for requiring each employee engaged on the work to display identification as may be approved and directed by the Contracting Office. All prescribed identification shall immediately be delivered to the Contracting Officer, for cancellation upon the release of any employee. When required by the Contracting Officer the Contractor shall obtain and submit fingerprints of all persons employed or to be employed on the project.

1.3.1 Identification Badge

The Contractor shall provide each employee an identification (ID) badge on the contract start date or on employment start date. The ID badge shall be made of nonmetallic material to prevent electrical shock. The badge shall be easily readable and include the employee's name, contractor's name, functional area of assignment, security clearance if applicable, and color photograph. The ID badge shall be approved by the Contracting Officer's Representative (COR) before the contract start date.

1.3.2 Display of ID Badges

Contractor personnel shall wear the ID badge at all times when performing work under this contract, to include attending Government meetings and conferences.

Unless otherwise specified in the contract, each contractor employee shall wear the ID badge in a conspicuous place on the front of exterior clothing and above the waist, except when safety or health reasons prohibit such placement. Also see paragraph in this section titled "Access Control Requirements".

1.3.3 Answering Telephone

Contractor personnel shall identify themselves as contractor employees when answering Government telephones.

1.3.4 Utilizing Electronic Mail

1.3.4.1 Contractor-Sent E-mail

When contractor personnel send e-mail messages to Government personnel while performing on this contract, the Contractor's e-mail address shall include the company name together with the person's name.

1.3.4.2 Use Address on Government Computers

When it is necessary for the Contractor personnel to have a user address on a Government computer, the Government will ensure that person's e-mail address includes the name of their company.

1.4 ACCESS CONTROL REQUIREMENTS

All contractor employees must comply with the installation's increased security posture. All Contractors who are employed at, or engage in work upon, any Federal military reservation are required to conform to the rules and regulations established by the national and local command authorities.

1.4.1 General Instructions

Contractors are immediately required to register all of their vehicles and provide a comprehensive list of their employees who will engage in employment on the post in accordance with the increased access security measures being implemented by the Fort. The current security posture requires 100% controlled access. As a result of this requirement, Contractors must comply with the following guidance.

1.4.1.1 List of Personnel

Contractors, on their company letterhead, shall annotate the contract number and project they are working under, and a list of all people who will require access to the post to fulfill the requirements of the contract. This list will be taken to the issuing Contracting Officer for a verification signature that the contract is valid.

1.4.1.2 List Submission

The list shall then be taken to the Provost Marshall's Office (PMO) located at 410 McPherson Avenue, where a copy will be made and kept on record for validation during 100% identification checks at the gate. Due to the turnover in personnel, submission of up-dated lists will be required every three months.

1.4.1.3 Vehicle Registration

All Contractors are required to register their vehicles at the PMO. This registration includes both company-owned vehicles or personally-owned vehicles that are required by the Contractor to fulfill the terms of an active contract. All Contractors will need licenses, registration and proof of insurance in order to register vehicles.

1.4.1.4 Multiple Vehicle Registration

For Contractors with two or more vehicles in their fleet, the PMO's office will allow them to send one employee in with proof of insurance and the vehicles' registration documents to register the company vehicles. It is the Contractor's responsibility to ensure that all operators of their vehicles are validly licensed and that their names are on the access roster for the contract.

1.4.1.5 Decals

Permanent post decals will be issued only to those Contractors whose contract terms exceed one year. All others will receive a 90-day pass and renew it as required for the duration of the contract.

1.4.1.6 Failure to Follow Procedures

Failure to follow these procedures may cause untimely delays in post access and could subject the Contractor to termination action. Such delays are not allowable as a claim against the Government due to the Contractor's failure to comply with all applicable regulations and DoD directives.

1.4.1.7 Completion of Contract

All vehicle passes will be turned in to the PMO upon completion of the contract. Contractors shall then provide a memo notifying the local contracting Officer that this has been completed.

1.4.2 Restricted Access to Military Installation

1.4.2.1 Controlled Access

The installation has instituted 100% controlled access. Controlled access means there will be military police located at the entry gates. Vehicles entering the installation may be subject to stop and search procedures. At times of increased security alerts, control may be increased or access may be restricted completely. Some gates may be closed during periods of the day or night.

1.4.2.2 Employee Identification

Each Contractor is responsible for furnishing to each employee, and for requiring each employee working on the installation, to display or possess identification as may be approved and directed by the Contracting Officer. All prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon the release of any employee.

1.4.2.3 Passes

Passes issued to Contractors and their employees are valid for 90 days and must be renewed upon expiration.

1.5 APPLICATION OF WAGE RATES

The inclusion of the Davis-Bacon Act General Wage Decision or the Service Contract Act Wage Determination in the solicitation is a statutory requirement. It is not a representation by the U.S. Army Corps of Engineers that any specific work task can be performed by any specific trade. Which work tasks can be performed by what trades depends on and is determined by the prevailing area practice for the local area where the contract is being performed. It is the sole responsibility of the bidder to determine and comply with the prevailing area practice. Inquiries regarding a prevailing area practice should be directed to the Corps of Engineers, Contractor Industrial Relations Specialist (telephone number 816-983-3723) or to the Department of Labor Regional Wage and Hour Division.

Application of wage rates and fringe benefits: For the application of the wage rates and fringe benefits contained in the Decisions of the Secretary of Labor, attached to and a part of this contract, all work shall be considered Heavy Construction.

1.6 PAYMENTS TO SUBCONTRACTORS

The Contractor's attention is directed to CONTRACT CLAUSE titled "Payment Under Fixed-Price Construction Contracts." In addition to the requirements set forth in the referenced paragraph, the Government will reimburse the Contractor, upon request, for amount of premiums paid by the subcontractors for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor furnishes evidence of full payment to the surety.

1.7 PAYMENTS TO CONTRACTOR (KCD MAY 90 - FORMERLY FAR 52.2/9101(a))

The following is an example of a Contractor's release of claims clauses required to comply with the provisions of paragraph (h) of the CONTRACT CLAUSE titled "Payments Under Fixed-Price Construction Contracts":

RELEASE OF CLAIMS

The undersigned Contractor under contract dated _____, 2000, between the United States of America and said Contractor for the _____ located at _____, in accordance with paragraph (h) of the CONTRACT CLAUSE titled "Payments Under Fixed-Price Construction Contracts" of said contract, hereby releases the United States, its officers, agents, and employees from any and all claims arising under or by virtue of said contract or any modification or change thereof except with respect to those claims, if any, listed below:

(Here itemize claims and amounts due.)

1.8 PARTNERING

The Government intends to encourage the foundation of a cohesive partnership with the Contractor and its subcontractor. This partnership will be structured to draw on the strengths of each organization to identify and achieve mutual goals with the intent to complete the Contract within budget, on schedule and in accordance with plans and specifications. This partnership will be bilateral in makeup, and participation will be totally voluntary. Any cost associated with implementing this partnership will be agreed to by the Contractor and the Government, and will be shared equally with no change in Contract price. To implement this partnership initiative, it is anticipated that thirty (30) days after Notice to Proceed, a team building workshop will be conducted. Follow-up workshops will be held periodically throughout the duration of the Contract as agreed to by the Contractor and the Government.

1.9 PROSPECTIVE CONTRACTOR RESPONSIBILITY

Each bidder shall furnish, within 3 calendar days after receipt of request therefor, data which will show the bidder's ability to perform the work or services required by this Invitation for Bids. Such data shall include as a minimum: Bank certification of financial capability, or a financial statement not over 60 days old, which will be treated as confidential (if over 60 days old, a certificate shall be attached thereto stating that the financial condition is substantially the same or, if not the same, the changes that have taken place); names of commercial and financial reporting agencies from whom credit reports may be obtained; trade creditors; name and address of bonding company; business and construction experience; past record of performance of Government contracts; and construction plant and equipment available for this job, with resume of work in progress or other data that will assure that the bidder is in

a position to perform the work within the time specified.

In addition, if the bid exceeds \$1,000,000, the bidder shall furnish upon request, a certified statement listing:

(a) Each contract awarded to him within the preceding three-month period exceeding \$1,000,000 in value with brief description of the contract.

(b) Each contract awarded to him within the preceding three-year period not already physically completed and exceeding \$5,000,000 in value with brief description of the contract.

(c) If the prospective Contractor is a joint venture, each joint venture member will be required to submit the above defined certification. There shall also be furnished any other available information which will serve to substantiate the bidder's qualifications as a responsible prospective Contractor. (KCD APR 84)

1.10 PERFORMANCE OF WORK BY CONTRACTOR

Bidder's attention is directed to SPECIAL CLAUSE titled "Performance of Work by Contractor." The successful bidder will be required to furnish the Contracting Officer, a description of the work which he will perform with his own organization (e.g., earthwork, paving, etc.), the percentage of the total work this represents, and the estimated cost thereof. Such description of work to be performed by the Contractor's own organization shall be furnished to the Contracting Officer within 10 days after award of the contract.

1.11 LABORATORY AND TESTING FACILITIES

The Contractor shall provide and maintain all measuring and testing devices, laboratory equipment, instruments, transportation, and supplies necessary to accomplish the required testing. All measuring and testing devices shall be calibrated at established intervals against certified standards. The Contractor's measuring and testing equipment shall be made available for use by the Government for verification of their accuracy and condition as well as for any inspection or test desired pursuant to the CONTRACT CLAUSE titled "Inspection of Construction." The location of the laboratory shall be convenient to the site such that test results are available prior to proceeding with the next sequential phase of the work. (KCD)

1.12 NORMAL WORKING HOURS

(a) Normal working hours are limited to Monday through Friday, 7:30 a.m. to 4:30 p.m., except for federal holidays.

(b) Work outside of normal working hours, or on weekends or federal holidays, is by exception only, and the Contractor shall obtain written approval for work to be performed outside of normal working hours. When work outside of normal work hours is requested by the Contractor, and permission is granted by the Contracting Officer, this will be for the convenience of the Contractor at no additional cost to the Government. The decision to permit work outside of normal hours lies solely with the Contracting Officer, and the denial of such a request will not be considered as the basis for an equitable adjustment under this contract.

(c) In unusual circumstances, such as emergency work, or when utility interruptions are required for an extended period of time, or traffic is adversely affected, etc., work outside of normal work hours may be required by the Contracting Officer.

1.13 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

(a) This provision specifies the procedure for determination of time extensions

for unusually severe weather in accordance with the CONTRACT CLAUSE titled "Default: (Fixed Price Construction)." In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

(b) The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities for the duration of the project.

Note: After the original contract completion date has passed, adverse weather that causes delay for the completion of the project will be granted day-for-day without deducting anticipated adverse weather delay days.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY

WORK DAYS BASED ON (5) DAY WORK WEEK

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
(8)	(5)	(4)	(4)	(5)	(5)	(4)	(4)	(4)	(4)	(3)	(5)

(c) Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the Contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day.

(* Monthly anticipated weather delays shall be adjusted proportionally if work is performed in a work week with greater than or less than a five-day work week. The following formula shall be used to adjust the monthly anticipated weather delays:

adjusted monthly anticipated weather delays = **A** multiplied by (**B** divided by **C**); where

A = The monthly anticipated adverse weather delay for a particular month based on a five-day work week.

B = The actual average number of days worked per week during that particular month.

C = The number five (5).

eg., If the monthly anticipated adverse weather delay for January based on a five-day work week is 10 days, but the Contractor actually worked an average of a six-day work week for that month, the monthly anticipated weather delay would be adjusted by applying the above formula as follows: $10 \times (6/5) = 12$ days.

1.14 REQUIRED INSURANCE SCHEDULE

In accordance with CONTRACT CLAUSE titled "Insurance - Work On A Government Installation," the Contractor shall procure and maintain during the entire period

of his performance under this contract the following minimum insurance.

Type	Amount
Workmen's Compensation State Statute	coverage complying with applicable
Employers' Liability	minimum amount of \$100,000.00
General Liability on Comprehensive Form of Policy	minimum limits of \$500,000 per occurrence for bodily injury which includes, but is not limited to, insurance for all work required herein
Comprehensive Automobile Liability	minimum limits of \$200,000 per person and \$500,000 per occurrence for bodily injury, and \$20,000 per occurrence for property damage

(End of clause)

1.15 CONTRACTOR-FURNISHED EQUIPMENT DATA

At or before 30 days prior to final inspection and acceptance of the work, the Contractor shall submit the data mentioned in the following subclauses.

(1) Equipment List. An itemized equipment list showing unit retail value and nameplate data including serial number, model number, size, manufacturer, etc., for all Contractor-furnished items of mechanical equipment, electrical equipment, and fire protection systems installed under this contract.

(2) Guarantees. A list of all equipment items which are specified to be guaranteed accompanied by a copy of each specific guarantee therefor. For each specific guaranteed item, a name, address, and telephone number shall be shown on the list for subcontractor who installed equipment, equipment supplier or distributor and equipment manufacturer. The completion date of the guarantee period shall correspond to the applicable specification requirements for each guaranteed item.

(3) Warranty Service Calls. The Contractor shall furnish to the Contracting Officer the names of local service representatives and/or Contractors that are available for warranty service calls and who will respond to a call within the time periods as follows: 4 hours for heating, air-conditioning, refrigeration, air supply and distribution, and critical electrical service systems and food service equipment, and 24 hours for all other systems. The names, addresses, and telephone numbers for day, night, weekend, and holiday service responses shall be furnished to the Contracting Officer and also posted at a conspicuous location in each mechanical and electrical room or close to the unit.

1.16 DATE OF SAFETY AND HEALTH REQUIREMENTS MANUAL (EM 385-1-1)

(a) The date of the U.S. Army Corps of Engineers Safety and Health Requirements Manual in effect on the date of this solicitation is 3 September 1996. See Section 00700, Contract Clause titled "Accident Prevention."

(b) Section 06.I of EM 385-1-1 is deleted. Job hazard analysis for confined space entry procedures is still required, as per 01.A.09 of EM 385-1-1. OSHA Standards 29 CFR 1910.146 or 29 CFR 1926 shall apply.

(c) Before initiation of work at the job site, an accident prevention plan, written by the prime contractor for the specific work and hazards of the contract

and implementing in detail the pertinent requirements of EM 385-1-1, will be reviewed and found acceptable by designated Government personnel.

1.17 CONSTRUCTION EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE

Whenever a modification or equitable adjustment of contract price is required, the Contractor's cost proposal for equipment ownership and operating expenses shall be as set forth in SPECIAL CLAUSE titled "Equipment Ownership and Operating Expense Schedule." A copy of EP 1110-1-8 "Construction Equipment Ownership and Operating Expense Schedule" dated August 1995 can be ordered from the Government Printing Office (GPO) by calling Telephone No. 202-512-1800.

1.18 SHOP DRAWINGS

The Contractor's attention is directed to clause "Specifications and Drawings for Construction" of the Contract Clauses.

1.19 SUBMITTALS

(a) Submittal Procedures. See Division One SECTION: SUBMITTAL.

(b) Shop Drawings shall be submitted in ample time to secure approval prior to the time the items covered thereby are to be delivered to the site. ENG Form 4025 and 4026 shall be used for the transmittal of shop drawings. Unless otherwise specified, shop drawings shall be submitted not less than 30 days before commencement of fabrication of fabricated items and not less than 15 days before delivery of standard stock manufactured items. Where materials are stock with the manufacturer, catalog data, including specifications and full descriptive matter, may be submitted as shop drawings. When catalog includes non applicable data, the applicable data shall be clearly designated and identified by item number, item name, and name of manufacturer. Shop drawings submitted (including initial and final submittals) shall be reproductions on high quality paper with clear and legible print. Drawings shall generally be bordered a minimum of one inch and trimmed to neat lines and unless otherwise specified, the minimum scale shall be 3/8-inch to the foot. Shop drawings quality will be subject to approval. Each shop drawing, including catalog data, shall be identified with a title block including the name of Contractor, contract number, name and location of project, and name of item of work or structure to which the shop drawing applies. Material fabricated or delivered to the site before approved shop drawings have been returned to the Contractor will be subject to rejection. NO CONSTRUCTION OR INSTALLATION SHALL BE DONE FOR ANY ITEM REQUIRING SHOP DRAWINGS, UNTIL ALL SHOP DRAWINGS FOR THAT ITEM HAVE BEEN APPROVED.

(c) As-Built Shop Drawings: Upon completion of the work under this contract, the Contractor shall furnish five complete sets of prints or one complete set of reproducibles of all shop drawings as finally approved. These drawings shall show all changes and revisions made up to the time the equipment is completed and accepted. The quality of the reproducibles and prints is subject to approval.

(d) As-Built Drawings: The Contractor shall maintain three separate sets of red-lined, full scale, as-built construction drawings marked up to fully indicate as-built conditions. These drawings shall be maintained in a current condition at all times until completion of the work, and shall be available for review by Government personnel at all times. All variations from the contract drawings, for whatever reason, including those occasioned by modifications, optional materials, and the required coordination between trades, shall be indicated. These variations shall be shown in the same general detail utilized in the contract drawings. The Contractor shall also be responsible for updating the Government-furnished CADD files to reflect the current as-built conditions throughout the duration of the project. The updated CADD design files shall be maintained in the AutoCAD 2000 software format consistent with the graphic standards established in the CADD contract drawings provided by the Government. The Contractor will be provided a copy of the Tri-Service CADD standards to

facilitate his efforts in the maintenance of design files. The updated CADD files shall be reviewed by the Government on a monthly basis during the progress payment evaluation. The Contractor shall be prepared to demonstrate the status of the updated CADD files in his on-site office. The as-built utility drawings shall show locations and elevations of all underground new utilities and existing utilities encountered, including dimensions from permanent structures and/or survey locations. The submittal requirements for as-built utility drawings shall be shown as separate activities on the Contractor-prepared network analysis. Upon completion of the work, the marked-up drawings and the updated CADD files shall be furnished to the Contracting Officer on CD ROM. In multiphase construction where portions of a system are to be turned over to the user prior to completion of the project, the marked-up drawings for that portion shall be furnished to the Contracting Officer at that time.
(MRD ltr 30 Oct 70 and KCD 8 Apr 91)

(e) CADD Files: The Government will provide to the Contractor, within 30 calendar days after Notice of Award, copies of the CADD computer files of the project drawings for the production of as-built drawings. These files will be in AutoCAD 2000 or newer software format. The Government provides no warranty, expressed or implied, of the CADD computer files. The Contractor shall assume all responsibility to verify the CADD drawing files. The Contractor will not utilize the CADD drawing computer files to resolve dimensional or other discrepancies. The Government will not guarantee the measurable accuracy of the CADD drawing computer files.

(f) Purchase Orders: Each purchase order issued by the Contractor or his subcontractors for materials and equipment to be incorporated into the project, shall be maintained on file at the Contractor's field office for inspection and review by Government representatives. Each purchase order shall (1) be clearly identified with applicable DA contract number, (2) carry an identifying number, (3) be in sufficient detail to identify the material being purchased, (4) indicate a definite delivery date, and (5) display the DMS priority rating. At the option of the Contractor, the copies of the purchase orders may or may not indicate the price of the articles purchased. (MRD Ltr 22 Oct 74)

1.20 SPECIAL REFERENCES

(a) Shop Drawings. Bidder's attention is directed to SPECIAL CLAUSE titled "Shop Drawings." The basic requirements for Shop Drawings are set forth in the CONTRACT CLAUSES and SPECIAL CLAUSES.

(b) Approved Equal. Bidder's attention is directed to SPECIAL CLAUSE titled "Approved Equal."

(c) Payment to Subcontractors. Bidder's attention is directed to SPECIAL CLAUSE titled "Payments to Subcontractors."

1.21 DIFFERENCES IN DRAWINGS

In addition to the provisions of CONTRACT CLAUSE paragraph "Specifications and Drawings for Construction," the structural drawings shall govern in cases where they differ from the architectural drawings.

1.22 LAYOUT OF WORK

(a) The Government has established bench marks and horizontal control points at the site of the work. These are described and indicated on contract drawings.

(b) From these control points the Contractor shall lay out the work by establishing all lines and grades at the site necessary to control the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or

on the contract drawings. All survey data shall be recorded in accordance with standard and approved methods. All field notes, sketches, recordings and computations made by the Contractor in establishing control points shall be available at all times during the progress of the work for ready examination by the Contracting Officer or his representative.

(c) The Contractor shall furnish, at his own expense, all such stakes, spikes, steel pins, templates, platforms, equipment, tools, and material and all labor as may be required in laying out any part of the work from the control points established by the Government. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other markers established by him until authorized to remove them. The Contractor shall be responsible for maintaining all boundary markers established by the Government. If any of the control points established at the site by the Government are destroyed by or through the negligence of the Contractor, they shall be replaced by the Contractor at his expense. The Contracting Officer may require that work be suspended at any time when horizontal and vertical control points established at the site by the Contractor are not reasonably adequate to permit checking the work. Such suspension will be withdrawn upon proper replacement of the control points.

1.23 DAMAGE TO WORK (1966 MAR OCE)

The responsibility for damage to any part of the permanent work shall be as set forth in the CONTRACT CLAUSE titled "Permits and Responsibilities". However, if, in the judgment of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood or earthquake, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor shall make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If, in the opinion of the Contracting Officer, there are no contract unit or lump sum prices applicable to any part of such work, an equitable adjustment pursuant to CONTRACT CLAUSE titled "Changes" of the contract will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense, regardless of the cause of such damage.

1.24 WORK ADJACENT TO ROADS AND HIGHWAYS

Where the construction work is on or adjacent to, or involves hauling over public or private roads, streets, or highways, all herein referred to as "roads," the said roads shall, except as otherwise specified or directed, be kept open for traffic at all times during the construction period. Further, the Contractor shall, during said construction, provide, erect and maintain warning signs, lanterns or torches or other safety devices and, when necessary, provide flagmen for protection of traffic to the satisfaction of the Contracting Officer and local authorities. The Contractor shall keep the right-of-way of the roads free of debris that might be caused to accumulate thereon by his operations, and upon completion of the work, shall clean up the said roads and repair any damage to the roads occasioned by his operations under this contract to the satisfaction of the Contracting Officer and local authorities having jurisdiction. The drainage from the roads shall not be obstructed by the construction work. The Contractor shall be responsible for obtaining and paying for all permits required for operation on all roads.

1.25 APPROVED EQUAL

The drawings and the TECHNICAL PROVISIONS of these specifications may, in some instances, refer to certain items of equipment, material, or article by trade name. References of this type shall not be construed as limiting competition,

but shall be regarded as establishing a standard of quality. In this respect, the Contractor's attention is directed to CONTRACT CLAUSE titled "Material and Workmanship."

1.26 SCHEDULE OF WORK

The Contractor's attention is directed to CONTRACT CLAUSE titled "Schedule for Construction Contracts," wherein if, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer.

1.27 UPKEEP OF ROADWAY AREAS WITHIN A MILITARY INSTALLATION WHICH THE CONTRACTOR USES

In addition to the requirements in CONTRACT CLAUSE titled "Operations and Storage Areas," the Contractor shall comply with the following requirements: Where the construction work is on or adjacent to, or involves hauling over public roads, streets, or highways located on a military installation, all herein referred to as "roads," the said roads shall except as otherwise specified or directed, be kept open for traffic at all times during the construction period. The Contractor shall keep the roads including adjacent construction site free of debris including litter, waste construction material, mud etc., that might be caused to accumulate thereon by his operations, and upon completion of the work, shall clean up the said roads and construction site and repair any damage occasioned with his operations under this contract to the satisfaction of the Contracting Officer. The drainage from the roads shall not be obstructed by the construction work.

1.28 PROTECTION OF UTILITY LINES

(a) It shall be the Contractor's responsibility to protect all existing utility lines from damage during excavation for utilities systems. Any damage resulting to existing utility systems shall be repaired by the Contractor, to the satisfaction of the Contracting Officer, at no additional cost to the Government.

(b) The Directorate of Installation Support (DIS) will delineate existing buried lines only for fiber/telephone and communications, and only when requested by the Resident Engineer. This delineation will define a four (4) foot area of liability. Any damage done to an existing line within two (2) feet of the flag shall be repaired by the Contractor as mentioned in paragraph (a) above. If the damage occurs outside the area, the Installation Engineer Office will assume responsibility for needed repairs.

1.29 UTILITY MARKING AND LOCATING

The Contractor shall be required to locate and mark underground utilities for Fort Leavenworth-owned water, sanitary sewer, storm sewer, and electrical, but excluding fiber/telephone and communications. The contractor will have use of Fort Leavenworth DIS utility drawings to aid in locating. The contractor shall be responsible for the location of the electric lines and all other utilities listed above that are of nonconductive construction, such as plastic or Transite, and have no tracer wire or other means of applying a signal are to be located from the utility maps to the best of the Contractor's ability. The utilities that are located from maps that appear to be in the vicinity of the excavation are to be hand-dug for location purposes. If a line is damaged that is within 10 feet of that shown on the utility maps, the Contractor will be held responsible for its repair. The Contractor shall contact Kansas One-Call for utility checks for Southern Star, Sprint, Southwestern Bell, and American Cablevision. For Leavenworth personnel will locate underground telephone and communications lines.

The Contractor shall contact the Directorate of Installation Support (DIS) Work Order Desk at (913) 684-5555 to request this service. The Contractor shall mark the proposed route or limits of the excavation in white prior to the request so

that the Government personnel will know where to mark for utilities. If the Contractor damages any marked lines during excavation, the Contractor shall contact the Contracting Officer immediately to determine whether the Contractor will perform repairs or reimburse the Government for repairs. The Contractor shall be required at the request of other contractors working in the area to flag the utilities being installed on this contract within 14 days of the request by the other contractor working in the area.

1.30 CLOSEOUT OF CONTRACTS

The closing out of various features of the contract shall be done before or on the Government contract construction completion date. The Contractor's specific submittals and items required for closeout include, but are not limited to, Operation and Maintenance Manuals (O&M), training, spare parts, equipment list, guarantees, as-built shop drawings and contract drawings.

The Contractor shall review the contract documents and prepare a plan for closeout no later than 90 days after the notice to proceed date for approval by the Contracting Officer Representative (COR). The closeout plan shall also include the Specification Volume No., specification reference section and building name on each closeout item. A summary of the type of closeout information required for each of the items shall be prepared by the Contractor for the closeout plan. The closeout data base shall be updated as required by the Contracting Officer to ensure adequate tracking of the items noted.

The following is a general list of the various types of closeout materials and the data required for each. (* indicates data required on initial submittal)

(a) O&M Manuals:

Descriptions*, Specification Paragraph*, Date Due*, No. Copies Due*, Date Submit
Action Code, Resubmit Date, Approved, Date to User

(b) Training Requirements:

Description*, Specification Paragraph*, Length Required*, Date Scheduled, Plan
Submitted, Plan Approved, Date Training Held

(c) Spare Parts Required:

Description*, Specification Paragraph*, Quantity Required*, Date Turned Over
to User

(d) Salvaged Material:

Description*, Specification-Plan Requirement*, Quantity*, Turn In Document
Received

(e) Government-Furnished Equipment:

Description*, Specification-Plan Requirement*, GFCI-GFGI*, Number Required*, Date
Equipment Data Required*, Date Equipment Required*, Turnover Document Provided

(f) Utilities Provided or Relocated by Others:

Description*, Relocate or Provide*, Specification-Plan Note*, Date Required*

1.31 MODIFICATIONS PRIOR TO DATE SET FOR OPENING BIDS

The right is reserved, as the interest of the Government may require, to revise or amend the specifications or drawings or both prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by an amendment or amendments to this Invitation for Bids. If the revisions and amendments are

of a nature which requires material changes in quantities or prices bid or both, the date set for opening bids may be postponed by such number of days as in the opinion of the issuing officer will enable bidders to revise their bids. In such cases, the amendment will include an announcement of the new date for opening bids. (KCD APR 84)

1.32 EXPEDITING NOTICE TO PROCEED

Notwithstanding the requirements of Block 12 on page 00010-1 of SECTION 00010 and SECTION 00100 paragraph titled "Late Submissions, Modifications, and Withdrawals of Bids," in order to expedite award of contract and issuance of NOTICE TO PROCEED, it is requested that an officer of the company or corporation determined to be the successful bidder shall appear in the office of the Commander, Kansas City District, Corps of Engineers, 757 Federal Building, 601 East 12th Street, Kansas City, Missouri, for signing contract documents. Therefore, upon written acceptance of this bid, mailed or otherwise furnished within 60 calendar days after the date of opening of bids, it is requested that the successful bidder shall within 48 hours after receipt of notification appear in the office of the Commander and execute Notice to Proceed documents, and give performance and payment bonds on Government Standard forms 25 and 25A with good and sufficient surety. It is also requested that the successful bidder furnish insurance certificates required in SPECIAL CLAUSE titled "Required Insurance Schedule" at this time.

1.33 UNEXPECTED HAZARDOUS SUBSTANCES

In the event that suspected hazardous substances are revealed during construction activities, all such construction activities in the immediate area shall be immediately suspended. Hazardous substances for purposes of this specification only, shall be defined as CERCLA hazardous substances, infectious or radioactive wastes, asbestos or oil. The Contractor shall leave the materials undisturbed and shall immediately report the find to the Contracting Officer's Representative (COR) so that proper authorities can be notified. The Contractor shall not resume construction activities in the vicinity of the suspected hazardous substances until written clearance is received from the COR. Identification and removal of any such materials will be conducted in accordance with all Federal, state and local environmental laws and regulations according to the CONTRACT CLAUSE titled "Differing Site Conditions."

1.34 SURVEY MARKERS

Reference is made to CONTRACT CLAUSE titled "Permits and Responsibilities". The Contractor shall be responsible for removing and relocating survey markers. Relocation shall be performed by a professional registered Land Surveyor.

1.35 DEMOLITION

Disposal of demolition waste shall be in accordance with all applicable Federal, State and local regulations, including the Kansas Department of Health and Environment (KDHE).

1.36 EXCAVATION NOTIFICATION

Prior to any excavation on either public or private properties, the Contractor shall call Kansas "DIG SAFE" to locate any underground utilities in the area.

1.37 ENCOUNTERING EXISTING UNDERGROUND UTILITIES

During any excavation activity, existing underground utilities encountered shall be immediately reported to the Contracting Officer.

Within 48 hours of encountering underground utilities, the Contractor shall submit to the Contracting Officer a marked-up copy of the contract drawing that

best represents the location, general description and approximate depth of the utilities below finished grade.

Also, the Contractor shall incorporate the above information in the required marked-up full scale contract drawing indicating as-built conditions in accordance with all contract provisions pertaining to "As-Built Drawings".

1.38 DAILY WORK SCHEDULES

In order to closely coordinate work under this contract, the Contractor shall prepare for and attend a weekly coordination meeting with the Contracting Officer and Using Service at which time the Contractor shall submit for coordination and approval his proposed daily work schedule for the next 2-week period. Required temporary utility services, time and duration of interruptions, road cuts, and repairs requiring traffic control, and protection of adjoining areas shall be included with the Contractor's proposed 2-week schedule. Coordination action by the Contracting Officer relative to these schedules will be accomplished during these weekly meetings.

1.39 SITE FENCING AND MOWING

The Contractor shall provide orange snow fencing around the entire work site; all site storage areas are considered a part of the work site. When grass/weeds exceed six inches in height, all areas contained by orange snow fencing shall be mowed. Snow fencing on pavements shall be supported by weighted orange barrels.

1.40 CLEANLINESS OF PAVED SURFACES

When paved surfaces are jointly used by the Government and Contractor, the Contractor shall keep all paved surfaces, and hardstands, clean at all times.

1.41 WORK ON WEEKENDS AND HOLIDAYS

If the Contractor intends to work on weekends or holidays, the Contractor shall notify the Security Police and the Resident Office by noon the Thursday prior to the weekend or 48 hours prior to a holiday.

1.42 SPECIAL SAFETY REQUIREMENTS

The Contractor shall comply with local fire regulations and NFPA 241-1986 "Safeguarding Building Construction and Demolition Operations". Fire extinguishers rated and approved by the National Fire Protection Association, of sufficient size, type and quantity to cope with all known hazards, shall be provided by the Contractor at the construction site during the execution of this contract; the extinguishers shall be removed upon acceptance of the project.

1.43 TEXT DELETED

TEXT DELETED

1.44 KANSAS SALES AND USE TAX

In accordance with FAR clause 52.229-3, notice is given that the contract price excludes the Kansas sales tax and compensating (use) tax on all sales of tangible personal property and materials purchased by the Contractor or subcontractors for the construction of projects, including repairing or remodeling facilities, for the United States. In accordance with Kan. Stats. Anno., sec. 79-3606(e), the Contracting Officer will obtain from the State and furnish to the Contractor an exemption certificate for this project for use by the Contractor and subcontractors in the purchase of materials for incorporation in the project and of services. The Contractor and the subcontractors shall furnish the number of such certificate to all suppliers from whom such purchases are made, and the suppliers shall execute invoices covering the same bearing the number of such

certificate. Pursuant to a 1977 Amendment to K.S.A., 1976 Supp., 79-3606(e), effective 1 July 1977, the Contractor is required to retain all invoices for a period of five (5) years during which time these invoices are subject to audit by the Kansas Director of Taxation. Upon completion of the project, the Contractor shall complete the Project Completion Certification (Form STD 77, Rev. 6/77) in duplicate returning one copy to the Contracting Officer, and forwarding the other to the Kansas Director of Taxation. (KCD)

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

* * * * *

-- End of Section --

SECTION 01310

PROGRESS CHART
07/01

PART 1 GENERAL

1.1 SCOPE

This section covers requirements for the Progress Chart, complete.

1.2 GENERAL

The purpose of these requirements is to assure adequate planning and execution of the work, to assist the Contracting Officer in appraising the reasonableness of the proposed schedule, to aid in evaluating progress of the work, and to serve as a basis for periodic progress payments.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated.

When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Progress Schedule; G, RE.

Document procedures.

PART 2 PRODUCTS

2.1 PROGRESS SCHEDULE

The Progress Chart shall conform with CONTRACT CLAUSE titled "Schedule for Construction Contracts". In preparing the Progress Chart, scheduling of construction is the responsibility of the Contractor.

2.2 SCHEDULED EARNINGS CURVES

In addition to the requirements mentioned above, the Contractor shall include with the Progress Chart, the scheduled earnings curves (time versus scheduled earnings). The curve shall be developed to reflect the scheduled earnings, in percentages, for the work scheduled for completion at any time. The curve shall be plotted on graph paper with the Contractor's earnings indicated on the vertical axis and a time scale by months on the horizontal axis. The result will be one "S" curve form which the scheduled progress can be evaluated at the end of each month. The graph will be revised each time there is a major revision in the Progress Chart.

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION 01312A

QUALITY CONTROL SYSTEM (QCS)
08/01

PART 1 GENERAL

1.1 GENERAL

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the contract period. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

- Administration
- Finances
- Quality Control
- Submittal Monitoring
- Scheduling
- Import/Export of Data

1.1.1 Correspondence and Electronic Communications

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format. Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

1.1.2 Other Factors

Particular attention is directed to Contract Clause, "Schedules for Construction Contracts", Contract Clause, "Payments", Section 01320A, PROJECT SCHEDULE, Section 01330, SUBMITTAL PROCEDURES, and Section 01451A, CONTRACTOR QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through QCS. Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Upon specific justification and request by the Contractor, the Government can provide QCS on 3-1/2 inch high-density diskettes or CD-ROM. Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available.

1.3 SYSTEM REQUIREMENTS

The following listed hardware and software is the minimum system configuration that the Contractor shall have to run QCS:

Hardware

IBM-compatible PC with 200 MHz Pentium or higher processor

32+ MB RAM

4 GB hard drive disk space for sole use by the QCS system

3 1/2 inch high-density floppy drive

Compact disk (CD) Reader

Color monitor

Laser printer compatible with HP LaserJet III or better, with minimum 4 MB installed memory.

Connection to the Internet, minimum 28 BPS

Software

Microsoft (MS) Access 97 or newer version database software

MS Windows 95 or newer version operating system (MS Windows NT 4.0 or newer is recommended)

Word Processing software compatible with MS Word 97 or newer

Internet browser

The Contractor's computer system shall be protected by virus protection software that is regularly upgraded with all issued manufacturer's updates throughout the life of the contract.

Electronic mail (E-mail) compatible with MS Outlook

1.4 RELATED INFORMATION

1.4.1 QCS User Guide

After contract award, the Contractor shall download instructions for the installation and use of QCS from the Government RMS Internet Website; the Contractor can obtain the current address from the Government. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

1.4.2 Contractor Quality Control(CQC) Training

The use of QCS will be discussed with the Contractor's QC System Manager during the mandatory CQC Training class.

1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government shall provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by files attached to E-mail. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

1.6 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the

QCS database throughout the duration of the contract. The Contractor shall establish and maintain the QCS database at the Contractor's site office. Data updates to the Government shall be submitted by E-mail with file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer, a data diskette or CD-ROM may be used instead of E-mail (see Paragraph DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM). The QCS database typically shall include current data on the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

1.6.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver subcontractor administrative data in electronic format via E-mail.

1.6.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office shall be prefixed with "S". Letters initiated by the Contractor's home (main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

1.6.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

1.6.2 Finances

1.6.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

1.6.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall

complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. The Contractor shall submit the payment requests with supporting data by E-mail with file attachment(s). If permitted by the Contracting Officer, a data diskette may be used instead of E-mail. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

1.6.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01451A, CONTRACTOR QUALITY CONTROL. Within seven calendar days of Government acceptance, the Contractor shall submit a data diskette or CD-ROM reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal register, QC requirements, and equipment list.

1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by Section 01451A, CONTRACTOR QUALITY CONTROL. Reports shall be submitted electronically to the Government using E-mail or diskette within 24 hours after the date covered by the report. Use of either mode of submittal shall be coordinated with the Government representative. The Contractor shall also provide the Government a signed, printed copy of the daily CQC report.

1.6.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC punch list items. The Contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

1.6.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

1.6.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 200.

1.6.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS

database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

1.6.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing, transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work progresses, and shall promptly provide this information to the Government via QCS.

1.6.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, SUBMITTAL REGISTER, in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update, ENG Form 4288, shall be produced using QCS. RMS will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

1.6.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Contract Clause "Schedules for Construction Contracts", or Section 01320A, PROJECT SCHEDULE, as applicable. This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF) (see Section 01320A PROJECT SCHEDULE). The updated schedule data shall be included with each pay request submitted by the Contractor.

1.6.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data using SDEF.

1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

1.8 DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM

The Government-preferred method for Contractor's submission of updates, payment requests, correspondence and other data is by E-mail with file attachment(s). For locations where this is not feasible, the Contracting Officer may permit use of computer diskettes or CD-ROM for data transfer. Data on the disks or CDs shall be exported using the QCS built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

1.8.1 File Medium

The Contractor shall submit required data on 3-1/2 inch double-sided high-density diskettes formatted to hold 1.44 MB of data, capable of running under Microsoft Windows 95 or newer. Alternatively, CD-ROMs may be used. They shall conform to industry standards used in the United States. All data shall be provided in English.

1.8.2 Disk or CD-ROM Labels

The Contractor shall affix a permanent exterior label to each diskette and CD-ROM submitted. The label shall indicate in English, the QCS file name, full contract number, contract name, project location, data date, name and telephone number of person responsible for the data.

1.8.3 File Names

The Government will provide the file names to be used by the Contractor with the QCS software.

1.9 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least monthly, the Contractor shall generate and submit an export file to the Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the Contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions.

The Contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification.

-- End of Section --

SECTION 01330

SUBMITTAL PROCEDURES
09/00

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION

Submittals required are identified by SD numbers and titles as follows:

SD-01 Preconstruction Submittals

SD-02 Shop Drawings

SD-03 Product Data

SD-04 Samples

SD-06 Test Reports

SD-07 Certificates

SD-10 Operation and Maintenance Data

SD-11 Closeout Submittals

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 Government Approved

Government approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.2.2 Information Only

All submittals not requiring Government or AE review will contain no reviewer classification on the submittal register, and will be for information only. These information only submittals shall be sent directly to the appropriate Area/Resident Engineer's office.

1.3 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.4 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. **Caution:** The Contractor is cautioned that for each Contractor's resubmittal required beyond the initial submittal and one resubmittal for corrections required by the Contracting Officer, the Contracting Officer will assess Administrative Deduction in the amount of \$500.00 from the progress payments due the Contractor. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

1.5 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

PART 2 PRODUCTS (Not used)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

3.2 SUBMITTAL REGISTER

At the end of this section is a submittal register showing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The Contractor shall complete and submit the forms to the Contracting Officer for approval within twenty (20) calendar days after the Notice to Proceed. The Contractor shall maintain a submittal register for the project in accordance with Section 01312 QUALITY CONTROL SYSTEM (QCS).

3.3 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of thirty (30) calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

3.4 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.5 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

3.5.1 Procedures

The Contractor shall submit for approval five (5) copies of all submittals. For all Military projects an additional copy of all submittals (for information only) related to fire protection/detection systems shall be submitted to the Public Works Office for review by the Fire Chief. The mailing address for these submittals shall be obtained at the preconstruction conference. Items not to be submitted in quintuplicate, such as samples and test cylinders, shall be submitted accompanied by five (5) copies of ENG Form 4025. Items to be sent to the Kansas City District Office shall be sent to EC-DS, addressed as follows, where distribution will be made to the appropriate reviewer:

US Army Engineer District, Kansas City
ATTN: EC-DS (Shop Drawing Coordinator)
Federal Building, 601 East 12th Street
Kansas City, Missouri 64106-2896

Items to be submitted for AE review shall be sent to the following address:

Bucher, Willis & Ratliff
609 West North Street
Salina, Kansas 67401-2064

3.5.2 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

3.6 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

3.7 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. 4 copies of the submittal will be retained by the Contracting Officer and 2 copies of the submittal will be returned to the Contractor.

3.8 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications;

will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

3.9 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR

(Firm Name)

_____ Approved

_____ Approved with corrections as noted on submittal data and/or
attached sheets(s).

SIGNATURE: _____

TITLE: _____

DATE: _____

-- End of Section --

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

- | | |
|---|---|
| A -- Approved as submitted. | E -- Disapproved (See attached). |
| B -- Approved, except as noted on drawings. | F -- Receipt acknowledged. |
| C -- Approved, except as noted on drawings.
Refer to attached sheet resubmission required. | FX -- Receipt acknowledged, does not comply
as noted with contract requirements. |
| D -- Will be returned by separate correspondence. | G -- Other (<i>Specify</i>) |

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

SUBMITTAL REGISTER

CONTRACT NO.

oma

TITLE AND LOCATION

Demolition of USDB Castle

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	GOVT CLASSIFICATION OR REFERENCE WORK	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION		DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01310	SD-07 Certificates														
			Progress Schedule	2.1	G RE												
		01355A	SD-01 Preconstruction Submittals														
			Environmental Protection Plan	1.5	G RE												
		01525	SD-01 Preconstruction Submittals														
			Accident Prevention Plan (APP)	1.8	G RE												
			Activity Hazard Analysis (AHA)	1.9	G RE												
			Crane Critical Lift Plan	1.8.1	G RE												
			SD-06 Test Reports														
			Reports	1.13													
			Accident Reports	1.13.1													
			Monthly Exposure Reports	1.13.3													
			Regulatory Citations and	1.13.4													
			Violations														
			Crane Reports	1.13.5													
			Certificate of Compliance	1.13.6													
			SD-07 Certificates														
			Confined Space Entry Permit	1.10													
		01780A	SD-02 Shop Drawings														
			As-Built Drawings	1.2.1	G RE												
			SD-03 Product Data														
			As-Built Record of Equipment and	1.2.2	G RE												
			Materials														
			Warranty Management Plan	1.3.1	G RE												
			Warranty Tags	1.3.5	G RE												
			Final Cleaning	1.6	G RE												

SUBMITTAL REGISTER

CONTRACT NO.

oma

TITLE AND LOCATION

Demolition of USDB Castle

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	GOVT CLASSIFICATION OR REVIEW NUMBER	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION		DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02090	SD-01 Preconstruction Submittals														
			List of Hazardous Materials	1.1.1	G RE												
			List of Material Safety Data Sheets(MSDS)	1.1.1													
			SD-07 Certificates														
			Proof of Disposal	1.6.3	G RE												
		02220	SD-03 Product Data														
			Work Plan	1.6.2	G RE												
			SD-07 Certificates														
			Demolition plan	1.8	G RE												
			Notifications	1.4.1	G RE												
			Notification of Demolition and Renovation forms	1.4.1	G RE												
		02316a	SD-06 Test Reports														
			Field Density Tests	3.4.2													
			Testing of Backfill Materials	3.4.1													
		02370a	SD-02 Shop Drawings														
			Layout	3.2.2													
			Erosion Control	3.2.2													
			Maintenance Record	3.6													
			SD-03 Product Data														
			Geosynthetic Binders	2.2.2													
			Geotextile Fabrics	2.4													
			Synthetic Grid Systems	2.6.1													
			Equipment	1.3													
			Finished Grade	3.1.1													

SUBMITTAL REGISTER

CONTRACT NO.

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TITLE AND LOCATION

Demolition of USDB Castle

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	GOVT CLASSIFICATION REVIEWER	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION		DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02370a	Erosion Control Blankets	2.5													
			SD-04 Samples														
			Materials	1.4													
			SD-06 Test Reports														
			Geosynthetic Binders	2.2.2													
			Geotextile Fabrics	2.4													
			Erosion Control Blankets	2.5													
			Synthetic Grid Systems	2.6.1													
			SD-07 Certificates														
			Fill Material	3.3.5.1													
			Mulch	2.3													
			Geotextile Fabrics	2.4													
			Geosynthetic Binders	2.2.2													
			Synthetic Soil Binders	2.2.1													
			Erosion Control Plan	3.1													
			Construction Work Sequence	3.1													
			Schedule														
			Installer's Qualification	1.6													
			Recycled Plastic	2.1													
			Wood By-Products	2.3.6													
			Wood Cellulose Fiber	2.3.3													
			SD-10 Operation and Maintenance														
			Data														
			Maintenance Instructions	3.6.1.1													
		02630a	SD-03 Product Data														
			Placing Pipe	3.3													

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION		DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02630a	SD-04 Samples														
			Pipe for Culverts and Storm	2.1													
			Drains														
			SD-07 Certificates														
			Resin Certification	2.1.1													
			Pipeline Testing	3.7													
			Hydrostatic Test on Watertight	2.6													
			Joists														
			Determination of Density	3.6.5													
			Frame and Cover for Gratings	2.3.3													
		02741a	SD-03 Product Data														
			Mix Design	2.3	G RE												
			Contractor Quality Control	3.10	G RE												
			SD-04 Samples														
			Asphalt Cement Binder	2.2													
			Aggregates	2.1													
			SD-06 Test Reports														
			Aggregates	2.1	G RE												
			QC Monitoring	3.10.3.10													
			SD-07 Certificates														
			Asphalt Cement Binder	2.2	G RE												
			Testing Laboratory	3.6													
		02770a	SD-03 Product Data														
			Manufactured Material and	2.1	G RE												
			Product														
			Certified Delivery Tickets	2.2	G RE												

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION		DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02770a	SD-04 Samples														
			Strength Test	3.8.2.1	G RE												
			SD-06 Test Reports														
			Field Quality Control	3.8	G RE												
			Material Test Report	2.1	G RE												
		02921a	SD-03 Product Data														
			Quantity Check	3.5	G RE												
			Seed Establishment Period	3.8	G RE												
			Maintenance Record	3.8.3.2	G RE												
			SD-07 Certificates														
			Seed	2.1.1	G RE												
			Fertilizer	2.2.1	G RE												
			Mulch	2.3	G RE												
		13280A	SD-03 Product Data														
			Respiratory Protection Program	1.12	G AE												
			Cleanup and Disposal	3.11	G AE												
			Detailed Drawings	3.6.5.1	G AE												
			Materials and Equipment	1.3	G AE												
			Qualifications	1.5	G AE												
			Training Program	1.11	G AE												
			Medical Requirements	1.10	G AE												
			SD-06 Test Reports														
			Exposure Assessment and Air Monitoring	3.9	G AE												
			Licenses, Permits and Notifications	1.14	G AE												

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(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		13280A	SD-07 Certificates														
			Vacuum, Filtration and Ventilation Equipment	1.20													
		13281A	SD-03 Product Data														
			Materials and Equipment	1.15													
			Expendable Supplies	1.16													
			Qualifications	1.5	G RE												
			SD-06 Test Reports														
			Accident Prevention Plan (APP)	1.7	G RE												
			Sampling and Analysis	1.12	G RE												
		13286N	SD-07 Certificates														
			Qualifications of CIH	1.8.1	G RE												
			Training Certification	1.8.1	G RE												
			PCB and Lamp Removal Work Plan	1.8.2	G RE												
			SD-11 Closeout Submittals														
			Certification of Decontamination	3.2.4													
			Certificate of Disposal and/or Recycling	3.5.2.1													
		16375A	SD-02 Shop Drawings														
			Electrical Distribution System	3.7.3	G RE												
			As-Built Drawings		G RE												
			SD-03 Product Data														
			Nameplates	2.2	G RE												
			Material and Equipment	2.1	G RE												
			General Installation Requirements	3.1	G RE												

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TITLE AND LOCATION

Demolition of USDB Castle

CONTRACTOR

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SECTION 01355A

ENVIRONMENTAL PROTECTION
02/02

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (1996) U.S. Army Corps on Engineers Safety and Health Requirements Manual

40 CFR 260 (1999) Hazardous Waste Management System, General

1.2 GENERAL REQUIREMENTS

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

1.3 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by subcontractors.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G, RE.

The environmental protection plan.

1.5 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during construction. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this section, but which the Contractor considers necessary, shall be identified and discussed after those

items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the Contractor shall meet with the Contracting Officer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

1.5.1 Compliance

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

1.5.2 Contents

The environmental protection plan shall include, but shall not be limited to, the following:

- a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.
- b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.
- c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.
- d. Description of the Contractor's environmental protection personnel training program.
- e. An erosion and sediment control plan which identifies the type and location of the erosion and sediment controls to be provided. The plan shall include monitoring and reporting requirements to assure that the control measures are in compliance with the erosion and sediment control plan, Federal, State, and local laws and regulations. A Storm Water Pollution Prevention Plan (SWPPP) may be substituted for this plan.
- f. Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on the site.
- g. Traffic control plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Plan shall include measures to minimize the amount of mud transported onto paved public roads by vehicles or runoff.
- h. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.
- i. Drawing showing the location of borrow areas.
- j. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris. The plan shall include schedules for disposal. The Contractor shall identify any subcontractors responsible for the transportation and disposal of solid waste. Licenses or permits shall be submitted for solid waste disposal sites that are not a commercial operating facility. Evidence of the disposal

facility's acceptance of the solid waste shall be attached to this plan during the construction. The Contractor shall attach a copy of each of the Non-hazardous Solid Waste Diversion Reports to the disposal plan. The report shall be submitted on the first working day after the first quarter that non-hazardous solid waste has been disposed and/or diverted and shall be for the previous quarter (e.g. the first working day of January, April, July, and October). The report shall indicate the total amount of waste generated and total amount of waste diverted in cubic yards or tons along with the percent that was diverted.

k. A recycling and solid waste minimization plan with a list of measures to reduce consumption of energy and natural resources. The plan shall detail the Contractor's actions to comply with and to participate in Federal, State, Regional, and local government sponsored recycling programs to reduce the volume of solid waste at the source.

l. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

m. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, a copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the contaminant prevention plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.

n. A waste water management plan that identifies the methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines. If a settling/retention pond is required, the plan shall include the design of the pond including drawings, removal plan, and testing requirements for possible pollutants. If land application will be the method of disposal for the waste water, the plan shall include a sketch showing the location for land application along with a description of the pretreatment methods to be implemented. If surface discharge will be the method of disposal, a copy of the permit and associated documents shall be included as an attachment prior to discharging the waste water. If disposal is to a sanitary sewer, the plan shall include documentation that the Waste Water Treatment Plant Operator has approved the flow rate, volume, and type of discharge.

o. A historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on the project site: and/or identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be onsite or in the area are discovered during construction. The plan shall include methods to assure the protection of known or discovered resources and shall identify lines of communication between Contractor personnel and the Contracting Officer.

1.5.3 Appendix

Copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents shall be attached, as an appendix, to the Environmental Protection Plan.

1.6 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.7 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

1.8 PERMITS

The Contractor shall obtain all needed permits or licenses. The Government will not obtain any permits for this project; see Contract Clause PERMITS AND RESPONSIBILITIES. The Kansas Department of Health and Environment, through the National Pollutant Discharge Elimination System (NPDES), requires stormwater construction project permitting. The Contractor shall be responsible for implementing the terms and requirements of the appropriate permits as needed and for payment of all fees.

1.8.1 Stormwater Pollution Prevention Plan (SWP2)

The Contractor shall develop a stormwater pollution prevention plan (SWP2) specific to construction activities which are to be employed at this site. The plan shall be in conformance with the Kansas Department of Health and Environment's (KDHE's) National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit requirements for construction activities. Copies of the permit requirements can be obtained from the following:

Kansas Department of Health and Environment
1000 SW Jackson, Suite 420
Topeka, KS 66612-1367
785-296-5549/6804 (Alan Brooks/Joe Mester)

1.8.2 Notice of Intent (NOI) Requirements

The Notice of Intent (NOI) for Stormwater Runoff from Construction Activities and the initial permit fee required by KDHE will be filed by the Corps of Engineers prior to construction start. The Contractor shall be responsible for all remaining requirements of the permit, to include development of the Stormwater Pollution Prevention Plan, submitting the annual fee to KDHE, required inspections, obtaining contractor certifications, maintaining on-site files, submitting the Notice of Termination to KDHE, etc. The Contractor shall be responsible for complying with all KDHE requirements. The Contractor shall provide copies of all documents to the Government within five working days of completion or approval, as appropriate.

A copy of the NOI and the Authorization to Discharge will be provided to the Contractor. The Government will also designate a representative of the Contractor to sign the inspection reports as outlined in Part VI of the permit.

The permit requirements include, but are not limited to the following:

The SWP2 plan shall be prepared using the concepts and methods for Best Management Practices (BMP) described in Environmental Protection Agency (EPA) document number EPA 832-R-92-005, Stormwater Management for Construction Activities - Developing Pollution Prevention Plans and Best Management Practices, Sep 92. The Contractor is not limited to the BMPs in this guidance manual but should develop BMPs with the goal of site specific effectiveness.

The SWP2 plan shall be prepared under the supervision of and sealed by a licensed professional engineer or landscape architect or a certified professional in erosion and sediment control. The engineer or landscape architect must be licensed to practice in the State of Kansas.

1.8.3 Preconstruction Survey

Prior to starting any onsite construction activities, the Contractor and the Contracting Officer shall make a joint condition survey after which the Contractor shall prepare a brief report indicating on a layout plan the condition of trees, shrubs and grassed areas immediately adjacent to work sites and adjacent to the assigned storage area and access routes as applicable. This report will be signed by both the Contracting Officer and the Contractor upon mutual agreement as to its accuracy and completeness.

1.8.4 Meetings

The Contractor shall meet with representatives of the Contracting Officer to alter the environmental protection plan as needed for compliance with the environmental pollution control program.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the drawings and specifications. Prior to the beginning of any construction, the Contractor shall identify any land resources to be preserved within the work area. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without approval. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. The Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, soil, or other materials displaced into uncleared areas shall be removed by the Contractor.

3.1.1 Work Area Limits

Prior to commencing construction activities, the Contractor shall mark the areas that need not be disturbed under this contract. Isolated areas within the general work area which are not to be disturbed shall be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, any markers shall be visible in the dark. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

3.1.2 Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. The Contractor shall restore landscape features damaged or destroyed during construction operations outside the limits of the approved work area.

3.1.3 Erosion and Sediment Controls

The Contractor shall be responsible for providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations. The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. The Contractor shall construct or install temporary and permanent erosion and sediment control best management practices (BMPs). BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences, construction of terraces, interceptor channels, sediment traps, inlet and outfall protection, diversion channels, and sedimentation basins. Any temporary measures shall be removed after the area has been stabilized.

3.1.4 Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Erosion and sediment controls shall be provided for on-site borrow and spoil areas to prevent sediment from entering nearby waters. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas.

3.2 WATER RESOURCES

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwise indicated. All water areas affected by construction activities shall be monitored by the Contractor. For construction activities immediately adjacent to impaired surface waters, the Contractor shall be capable of quantifying sediment or pollutant loading to that surface water when required by State or Federally issued Clean Water Act permits.

3.2.1 Cofferdams, Diversions, and Dewatering Operations

Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to maintain compliance with existing State water quality standards and designated uses of the surface water body. The Contractor shall comply with the States of Kansas and Missouri water quality standards and anti-degradation provisions.

3.2.2 Stream Crossings

Stream crossings shall allow movement of materials or equipment without violating water pollution control standards of the Federal, State, and local governments.

3.2.3 Wetlands

The Contractor shall not enter, disturb, destroy, or allow discharge of contaminants into any wetlands. The Contractor shall be responsible for the protection of wetlands shown on the drawings in accordance with paragraph ENVIRONMENTAL PERMITS, REVIEWS, AND APPROVALS. Authorization to enter specific wetlands identified shall not relieve the Contractor from any obligation to protect other wetlands within, adjacent to, or in the vicinity of the construction site and associated boundaries.

3.3 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.

3.3.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from asphaltic batch plants; shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. The Contractor must have sufficient, competent equipment available to accomplish these tasks. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs. The Contractor shall comply with all State and local visibility regulations.

3.3.2 Odors

Odors from construction activities shall be controlled at all times. The odors shall not cause a health hazard and shall be in compliance with State regulations and/or local ordinances.

3.3.3 Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise.

3.4 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

If during excavation or other construction activities any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall cease all activities that may result in impact to or the destruction of these resources. The Contractor shall secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

3.5 BIOLOGICAL RESOURCES

The Contractor shall minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations.

3.6 PREVIOUSLY USED EQUIPMENT

The Contractor shall clean all previously used construction equipment prior to bringing it onto the project site. The Contractor shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. The Contractor shall consult with the USDA jurisdictional office for additional cleaning requirements.

3.7 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.8 MILITARY MUNITIONS

In the event the Contractor discovers or uncovers military munitions as defined in 40 CFR 260, the Contractor shall immediately stop work in that area and immediately inform the Contracting Officer.

3.9 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

3.10 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction in accordance with Contract Clause: "Cleaning Up". The Contractor shall, unless otherwise instructed in writing by the Contracting Officer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled and the entire area seeded unless otherwise indicated.

-- End of Section --

SECTION 01356A

STORM WATER POLLUTION PREVENTION MEASURES
08/96

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 4439	(1997) Standard Terminology for Geosynthetics
ASTM D 4491	(1999a) Water Permeability of Geotextiles by Permittivity
ASTM D 4533	(1991; R 1996) Trapezoidal Tearing Strength of Geotextiles
ASTM D 4632	(1991; R 1996) Grab Breaking Load and Elongation of Geotextiles
ASTM D 4751	(1999a) Determining Apparent Opening Size of a Geotextile
ASTM D 4873	(1995) Identification, Storage, and Handling of Geosynthetic Rolls

1.2 GENERAL

The Contractor shall implement the storm water pollution prevention measures specified in this section in a manner which will meet the requirements of Section 01354 ENVIRONMENTAL PROTECTION, and the requirements of the National Pollution Discharge Elimination System (NPDES) permit attached to that Section.

1.3 EROSION AND SEDIMENT CONTROLS

The controls and measures required by the Contractor are described below.

1.3.1 Stabilization Practices

The stabilization practices to be implemented shall include geotextiles, erosion control matts, etc. On his daily CQC Report, the Contractor shall record the dates when the major grading activities occur, (e.g., clearing excavation, and grading); when demolition activities temporarily or permanently cease on a portion of the site; and when stabilization practices are initiated. Except as provided in paragraphs UNSUITABLE CONDITIONS and NO ACTIVITY FOR LESS THAN 21 DAYS, stabilization practices shall be initiated as soon as practicable, but no more than 14 days, in any portion of the site where construction activities have permanently ceased.

1.3.1.1 Unsuitable Conditions

Where the initiation of stabilization measures by the fourteenth day after demolition activity permanently ceases is precluded by unsuitable conditions caused by the weather, stabilization practices shall be initiated as soon as practicable after conditions become suitable.

1.3.1.2 No Activity for Less Than 21 Days

Where demolition activity will resume on a portion of the site within 21 days from when activities ceased (e.g., the total time period that demolition activity is temporarily ceased is less than 21 days), then stabilization practices do not have to be initiated on that portion of the site by the fourteenth day after demolition activity temporarily ceased.

1.3.2 Structural Practices

Structural practices shall be implemented to divert flows from exposed soils, temporarily store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Structural practices shall be implemented in a timely manner to minimize erosion and sediment runoff. Structural practices shall include the following devices.

1.3.2.1 Silt Fences

The Contractor shall provide silt fences as a temporary structural practice to minimize erosion and sediment runoff. Silt fences shall be properly installed to effectively retain sediment immediately after completing each phase of work where erosion would occur in the form of sheet and rill erosion (e.g. clearing, excavation, and grading). Final removal of silt fence barriers shall be upon approval by the Contracting Officer.

1.3.2.2 Straw Bales

The Contractor shall provide bales of straw as a temporary structural practice to minimize erosion and sediment runoff. Bales shall be properly placed to effectively retain sediment immediately after completing each phase of work (e.g., clearing, excavation, and grading) in each independent runoff area (e.g., after clearing and grubbing in a area between a ridge and drain, bales shall be placed as work progresses, bales shall be removed/replaced/relocated as needed for work to progress in the drainage area). Final removal of straw bale barriers shall be upon approval by the Contracting Officer. Rows of bales of straw shall be provided as follows:

- a. Along the downhill perimeter edge of all areas disturbed.
- b. Along the top of the slope or top bank of drainage swales, etc. that traverse disturbed areas.
- c. Along the toe of all cut slopes and fill slopes of the construction areas.
- d. Perpendicular to the flow in the bottom of existing drainage ditches, channels, swales, etc. that traverse disturbed areas or carry runoff from disturbed areas.
- e. Perpendicular to the flow in the bottom of new drainage ditches, channels, and swales. Rows shall be spaced a maximum of 30 feet apart.
- f. At the entrance to culverts that receive runoff from disturbed areas.

PART 2 PRODUCTS

2.1 COMPONENTS FOR SILT FENCES

2.1.1 Filter Fabric

The geotextile shall comply with the requirements of ASTM D 4439, and shall consist of polymeric filaments which are formed into a stable network such that

filaments retain their relative positions. The filament shall consist of a long-chain synthetic polymer composed of at least 85 percent by weight of ester, propylene, or amide, and shall contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistance to deterioration due to ultraviolet and heat exposure. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life at a temperature range of 0 to 120 degrees F. The filter fabric shall meet the following requirements:

FILTER FABRIC FOR SILT SCREEN FENCE

PHYSICAL PROPERTY	TEST PROCEDURE	STRENGTH REQUIREMENT
Grab Tensile	ASTM D 4632	445 N min.
Elongation (%)		30 % max.
Trapezoid Tear	ASTM D 4533	245 N min.
Permittivity	ASTM D 4491	0.2 sec-1
AOS (U.S. Std Sieve)	ASTM D 4751	20-100

2.1.2 Silt Fence Stakes and Posts

The Contractor may use either wooden stakes or steel posts for fence construction. Wooden stakes utilized for silt fence construction, shall have a minimum cross section of 2 inches by 2 inches when oak is used and 4 inches by 4 inches when pine is used, and shall have a minimum length of 5 feet. Steel posts (standard "U" or "T" section) utilized for silt fence construction, shall have a minimum weight of 1.33 pounds per linear foot and a minimum length of 5 feet.

2.1.3 Identification Storage and Handling

Filter fabric shall be identified, stored and handled in accordance with ASTM D 4873.

2.2 COMPONENTS FOR STRAW BALES

The straw in the bales shall be stalks from oats, wheat, rye, barley, rice, or from grasses such as byhalia, bermuda, etc., furnished in air dry condition. The bales shall have a standard cross section of 14 inches by 18 inches. All bales shall be either wire-bound or string-tied. The Contractor may use either wooden stakes or steel posts to secure the straw bales to the ground. Wooden stakes utilized for this purpose, shall have a minimum dimensions of 2 inches x 2 inches in cross section and shall have a minimum length of 3 feet. Steel posts (standard "U" or "T" section) utilized for securing straw bales, shall have a minimum weight of 1.33 pounds per linear foot and a minimum length of 3 feet.

PART 3 EXECUTION

3.1 INSTALLATION OF SILT FENCES

Silt fences shall extend a minimum of 16 inches above the ground surface and shall not exceed 34 inches above the ground surface. Filter fabric shall be from a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are unavoidable, filter fabric shall be spliced together at a support post, with a minimum 6 inch overlap, and securely sealed. A trench shall be excavated approximately 4 inches wide and 4 inches deep on the upslope side of the location of the silt fence. The 4-inch by 4-inch trench shall be backfilled and the soil compacted over the filter fabric. Silt fences shall be removed upon approval by the Contracting Officer.

3.2 INSTALLATION OF STRAW BALES

Straw bales shall be placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another. Straw bales shall be installed so that bindings are oriented around the sides rather than along the tops and bottoms of the bales in order to prevent deterioration of the bindings. The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked (gaps filled by wedging with straw), the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill side and shall be built up to 4 inches against the uphill side of the barrier. Loose straw shall be scattered over the area immediately uphill from a straw bale barrier to increase barrier efficiency. Each bale shall be securely anchored by at least two stakes driven through the bale. The first stake or steel post in each bale shall be driven toward the previously laid bale to force the bales together. Stakes or steel pickets shall be driven a minimum 18 inches deep into the ground to securely anchor the bales.

3.3 MAINTENANCE

The Contractor shall maintain the temporary and permanent vegetation, erosion and sediment control measures, and other protective measures in good and effective operating condition by performing routine inspections to determine condition and effectiveness, by restoration of destroyed vegetative cover, and by repair of erosion and sediment control measures and other protective measures. The following procedures shall be followed to maintain the protective measures.

3.3.1 Silt Fence Maintenance

Silt fences shall be inspected in accordance with paragraph INSPECTIONS. Any required repairs shall be made promptly. Close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting. Should the fabric on a silt fence decompose or become ineffective, and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits shall be removed when deposits reach one-third of the height of the barrier. When a silt fence is no longer required, it shall be removed. The immediate area occupied by the fence and any sediment deposits shall be shaped to an acceptable grade. The areas disturbed by this shaping shall be seeded in accordance with Section 02921A, .

3.3.2 Straw Bale Maintenance

Straw bale barriers shall be inspected. Close attention shall be paid to the repair of damaged bales, end runs and undercutting beneath bales. Necessary repairs to barriers or replacement of bales shall be accomplished promptly. Sediment deposits shall be removed when deposits reach one-half of the height of the barrier. Bale rows used to retain sediment shall be turned uphill at each end of each row. When a straw bale barrier is no longer required, it shall be removed. The immediate area occupied by the bales and any sediment deposits shall be shaped to an acceptable grade. The areas disturbed by this shaping shall be seeded in accordance with Section 02921A SEEDING.

-- End of Section --

SECTION 01420

SOURCES FOR REFERENCE PUBLICATIONS
03/03

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization, (e.g. ASTM B 564 Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number.

ACI INTERNATIONAL (ACI)

P.O. Box 9094
Farmington Hills, MI 48333-9094
Ph: 248-848-3700
Fax: 248-848-3701
Internet: <http://www.aci-int.org>

AIR CONDITIONING AND REFRIGERATION INSTITUTE (ARI)

4100 North Fairfax Dr., Suite 200
ATTN: Pubs Dept.
Arlington, VA 22203
Ph: 703-524-8800
Fax: 703-528-3816
E-mail: ari@ari.org
Internet: <http://www.ari.org>

AIR CONDITIONING CONTRACTORS OF AMERICA (ACCA)

2800 Shirlington Road, Suite 300
Arlington, VA 22206
Ph: 703-575-4477
FAX: 703-575-4449
Internet: <http://www.acca.org>

AIR DIFFUSION COUNCIL (ADC)

1000 East Woodfield Road, Suite 102
Shaumburg, IL 60173-5921
Ph: 847-706-6750
Fax: 847-706-6751
Internet: <http://www.flexibleduct.org>

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL (AMCA)

30 W. University Dr.
Arlington Heights, IL 60004-1893
Ph: 847-394-0150
Fax: 847-253-0088
Internet: <http://www.amca.org>

ALUMINUM ASSOCIATION (AA)
900 19th Street N.W., Ste 300
Washington, DC 20006
Ph: 202-862-5100
Fax: 202-862-5164
Internet: <http://www.aluminum.org>

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1827 Walden Ofc. Sq.
Suite 104
Schaumburg, IL 60173-4268
Ph: 847-303-5664
Fax: 847-303-5774
Internet: <http://www.aamanet.org>

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)
444 N. Capital St., NW, Suite 249
Washington, DC 20001
Ph: 202-624-5800
Fax: 202-624-5806
Internet: <http://www.aashto.org>

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)
P.O. Box 12215
Research Triangle Park, NC 27709-2215
Ph: 919-549-8141
Fax: 919-549-8933
Internet: <http://www.aatcc.org>

AMERICAN BEARING MANUFACTURERS ASSOCIATION (ABMA)
2025 M Street, NW, Suite 800
Washington, DC 20036
Ph: 202-367-1155
Fax: 202-367-2155
Internet: <http://www.abma-dc.org>

AMERICAN BOILER MANUFACTURERS ASSOCIATION (ABMA)
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Arlington, VA 22203-1900
Ph: 703-522-7350
Fax: 703-522-2665
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AMERICAN CONCRETE PIPE ASSOCIATION (ACPA)
222 West Las Colinas Blvd., Suite 641
Irving, TX 75039-5423
Ph: 972-506-7216 or 800-290-2272
Fax: 972-506-7682
Internet: <http://www.concrete-pipe.org>

e-mail: info@concrete-pipe.org

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)
1330 Kemper Meadow Dr.

Cincinnati, OH 45240
Ph: 513-742-2020
Fax: 513-742-3355
Internet: <http://www.acgih.org>
E-mail: mail@acgih.org

AMERICAN FOREST & PAPER ASSOCIATION (AF&PA)
American Wood Council
ATTN: Publications Dept.
1111 Nineteenth St. NW, Suite 800
Washington, DC 20036
Ph: 800-878-8878 or 202-463-2700
Fax: 202-463-2785
Internet: <http://www.afandpa.org/>

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400 N. Capitol St. N.W. Suite 450
Washington, D.C. 20001
Ph: 202-824-7000
Fax: 202-824-7115
Internet: <http://www.aga.org>

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Washington, D.C. 20001
Ph: 202-824-7000
Fax: 202-824-7115
Internet: <http://www.aga.org>

AMERICAN GEAR MANUFACTURERS ASSOCIATION (AGMA)
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Alexandria, VA 22314-2730
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Fax: 703-684-0242
Internet: <http://www.agma.org>

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
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Publications: 800-644-2400
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Englewood, CO 80112
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Fax: 303-792-0669
Internet: <http://www.aitc-glulam.org>

AMERICAN IRON AND STEEL INSTITUTE (AISI)
1140 Connecticut Avenue, NW, Suite 705
Washington, DC 20036
Ph: 202-452-7100
FX: 202-463-6573
Internet: <http://www.steel.org>

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
1819 L Street, NW, 6th Floor
Washington, DC 20036
Ph: 202-293-8020
Fax: 202-293-9287
Internet: <http://www.ansi.org/>

Note --- Documents beginning with the letter "S" can be ordered from:

Acoustical Society of America
2 Huntington Quadrangle, Suite 1N01
Melville, NY 11747-4502
Ph: 516-576-2360
Fax: 516-576-2377
Internet: <http://asa.aip.org>
General e-mail: asa@aip.org

AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA)
1000 Vermont Avenue, NW, Suite 300
Washington, DC 20005-4914
Ph: 202-789-2900
FAX: 202-789-1893
Internet: <http://www.anla.org>

AMERICAN PETROLEUM INSTITUTE (API)
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Washington, DC 20005-4070
Ph: 202-682-8000
Fax: 202-682-8223
Internet: <http://www.api.org>

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800 I Street, NW
Washington, DC 20001
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FAX: 202-777-2534
Internet: <http://www.apha.org>

AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA)
8201 Corporate Dr., Suite 1125
Landover, MD 20785-2230
Ph: 301-459-3200
Fax: 301-459-8077
Internet: <http://www.arema.org>

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)
1711 Arlingate Lane
P.O. Box 28518
Columbus, OH 43228-0518

Ph: 800-222-2768; 614-274-6003
Fax: 614-274-6899
Internet: <http://www.asnt.org>

AMERICAN SOCIETY FOR QUALITY (ASQ)
600 North Plankinton Avenue
Milwaukee, WI 53203
Ph: 800-248-1946; 414-272-8575
Fax: 414-272-1734
Internet: <http://www.asq.org>

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)
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Reston, VA 20191-4400
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Fax: 703-295-6222
Internet: <http://www.asce.org>
e-mail: marketing@asce.org

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS
(ASHRAE)
1791 Tullie Circle, NE
Atlanta, GA 30329
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Fax: 404-321-5478
Internet: <http://www.ashrae.org>

AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE)
901 Canterbury, Suite A
Westlake, OH 44145
Ph: 440-835-3040
Fax: 440-835-3488
E-mail: info@asse-plumbing.org
Internet: <http://www.asse-plumbing.org>

AMERICAN WATER WORKS ASSOCIATION(AWWA)
6666 West Quincy Avenue
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Fax: 303-794-3951
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AMERICAN WELDING SOCIETY (AWS)
550 N.W. LeJeune Road
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Ph: 800-443-9353 - 305-443-9353
Fax: 305-443-7559
Internet: <http://www.aws.org>

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)
P.O. Box 5690
Grandbury, TX 76049-0690
Ph: 817-326-6300
Fax: 817-326-6306
Internet: <http://www.awpa.com>

APA - THE ENGINEERED WOOD ASSOCIATION (APA)
P.O.Box 11700
Tacoma, WA 98411-0700
Ph: 253-565-6600
Fax: 253-565-7265
Internet: <http://www.apawood.org>

ARCHITECTURAL WOODWORK INSTITUTE (AWI)
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Reston, VA 20190
Ph: 703-733-0600
Fax: 703-733-0584
Internet: <http://www.awinet.org>

ASBESTOS CEMENT PRODUCT PRODUCERS ASSOCIATION (ACPPA)
PMB114-1745 Jefferson Davis Highway
Arlington, VA 22202
Ph: 514-861-1153
Fax: 514-861-1152
Internet: www.asbestos-institute.ca

ASM INTERNATIONAL (ASM)
9639 Kinsman Road
Materials Park, OH 44073-0002
Ph: 440-338-5151
Fax: 440-338-4634
Internet: <http://www.asm-intl.org>

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Three Park Avenue
New York, NY 10016-5990
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Internet: <http://www.asme.org>

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Research Park Dr.
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1518 K St., NW
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Fax: 202-638-4833
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E-mail: aabchq@aol.com

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Fax: 610-832-9555
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Internet: Unknown
E-mail: Unknown

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Grand Rapids, MI 49546-7500
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United Kingdom
Phone: +44 (0)20 8996 9000
Fax: +44 (0)20 8996 7001
Email: cservices@bsi-global.com
Website: <http://www.bsi-global.com>

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BHMA)
355 Lexington Ave.
17th floor
New York, NY 10017
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Fax: 212-370-9047
Internet: <http://www.buildershardware.com>

CARPET AND RUG INSTITUTE (CRI)
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Fax: 706-278-8835
Internet: <http://www.carpet-rug.com>

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5959 Shallowford Rd., Suite 419
Chattanooga, TN 37421
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Fax: 423-892-0817
Internet: <http://www.cispi.org>

CEILINGS & INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION (CISCA)
1500 Lincoln Highway, Suite 202
St. Charles, IL 60174
Ph: 630-584-1919
Fax: 630-584-2003
Internet: <http://www.cisca.org>

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)
1600 Clifton Road
Atlanta, GA 30333
PH: 404-639-3311
Internet: <http://www.cdc.gov>

CHEMICAL FABRICS & FILM ASSOCIATION (CFFA)
 1300 Sumner Ave.
 Cleveland OH 44115-2851
 PH: 216-241-7333
 FAX: 216-241-0105
 Internet: <http://www.chemicalfabricsandfilm.com/>
 OK 2/03

CHLORINE INSTITUTE (CI)
 1300 Wilson Boulevard
 Rosslyn, VA 22209
 Ph: 703-741-5760
 Fax: 703-741-6068
 Internet: <http://www.cl2.com>

COMPRESSED AIR AND GAS INSTITUTE (CAGI)
 1300 Sumner Ave.
 Cleveland OH 44115-2851
 PH: 216-241-7333
 FAX: 216-241-0105
 Internet: <http://www.cagi.org/>

COMPRESSED GAS ASSOCIATION (CGA)
 4221 Walney Road, 5th Floor
 Chantilly, VA 20151-2923
 Ph: 703-788-2700
 Fax: 703-961-1831
 Internet: <http://www.cganet.com>
 e-mail: cga@cganet.com

CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
 933 N. Plum Grove Rd.
 Schaumburg, IL 60173-4758
 Ph: 847-517-1200
 Fax: 847-517-1206
 Internet: <http://www.crsi.org/>

CONSUMER PRODUCT SAFETY COMMISSION (CPSC)
 4330 East-West Highway
 Bethesda, MD 20814-4408
 Ph: 301-504-6816
 Fx: 301-504-0124 and 301-504-0025
 Internet: <http://www.cpsc.gov>

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 6724 Lone Oak Blvd.
 Naples, FL 34109
 Ph: 239-514-3441
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 Internet: <http://www.cemanet.org>

COOLING TECHNOLOGY INSTITUTE (CTI)
 2611 FM 1960 West
 Suite H-200
 Houston, TX 77068-3730
 Ph: 281-583-4087

Fax: 281-537-1721
Internet: <http://www.cti.org>

COPPER DEVELOPMENT ASSOCIATION (CDA)
260 Madison Ave.
New York, NY 10016
Ph: 212-251-7200
Fax: 212-251-7234
Internet: <http://www.copper.org>
E-mail: staff@cda.copper.org

CRANE MANUFACTURERS ASSOCIATION OF AMERICA (CMAA)
8720 Red Oak Blvd., Ste, 201
Charlotte, NC 28217
Ph: 704-676-1190 or 800-722-6832
Fx: 704-676-1199
Internet: http://www.mhia.org/psc/psc_products_cranes.cfm

DISTRICT OF COLUMBIA MUNICIPAL REGULATIONS (DCMR)
441 4th Street NW, Suite 520
Washington DC 20001
PH: 202-727-5090
Internet: <http://www.abfa.com/dcdocs/dcmrlist.htm>

DOOR AND ACCESS SYSTEM MANUFACTURERS ASSOCIATION (DASMA)
1300 Sumner Avenue
Cleveland, OH 44115-2851
Ph: 216-241-7333
Fax: 216-241-0105
Internet: <http://www.dasma.com>
e-mail: dasma@dasma.com

DOOR AND HARDWARE INSTITUTE (DHI)
14150 Newbrook Dr. Suite 200
Chantilly, VA 20151-2223
Ph: 703-222-2010
Fax: 703-222-2410
Internet: <http://www.dhi.org>
e-mail: info@dhi.org

DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA)
245 Riverchase Parkway East, Suite O
Birmingham, AL 35244
Ph: 205-402-8700
Fax: 205-402-8730
Internet: <http://www.dipra.org>
E-mail: info@dipra.org

EIFS INDUSTRY MEMBERS ASSOCIATION (EIMA)
3000 Corporate Center Drive, Suite 270
Morrow, GA 30260
Ph: 800-294-3462
Fax: 770-968-5818
Internet: <http://www.eima.com>

ELECTRICAL GENERATING SYSTEMS ASSOCIATION (EGSA)
1650 South Dixie Highway, Ste. 500
Boca Raton, FL 33432-7462
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-- End of Section --

SECTION 01451A

CONTRACTOR QUALITY CONTROL
05/02

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3740 (2001) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

ASTM E 329 (2000b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The site project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the contract. The site project superintendent in this context shall be the highest level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer, and shall be responsible for all construction and construction related activities at the site.

3.2 QUALITY CONTROL PLAN

The Contractor shall furnish for review by the Government, not later than 20 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used. The Government will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an

interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.1 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities must be approved by the Contracting Officer.)
- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.2 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance

during the construction. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.3 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure safety and contract compliance. The Safety and Health Manager shall receive direction and authority from the CQC System Manager and shall serve as a member of the CQC staff. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff shall maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The CQC staff shall be subject to acceptance by the Contracting Officer. The Contractor shall provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Complete records of all letters, material submittals, shop drawing submittals, schedules and all other project documentation shall be promptly furnished to the CQC organization by the Contractor. The CQC organization shall be responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a graduate engineer with 2 years experience in related work, or a construction person with a minimum of 5 years in related work. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned no other duties. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as for the designated CQC System Manager.

3.4.3 Additional Personnel

In addition to CQC personnel specified elsewhere in the contract, the Contractor shall provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: Electrical and Mechanical. These individuals shall be directly employed by the prime Contractor and may not be employed by a supplier or sub-contractor on this project; be responsible to the CQC System Manager; be physically present at the construction site during work on their areas of responsibility; and have the necessary education and/or experience in accordance with the experience matrix listed herein. These individuals shall have no other duties other than quality control.

Experience Matrix

Area	Qualifications
a. Electrical	Electrical Engineering Technician, 1/2 time
b. Mechanical	Mechanical Engineer, 1/2 time

3.4.4 Additional Requirement

In addition to the above experience and/or educational requirements, the CQC System Manager shall have completed the course entitled "Construction Quality Management for Contractors" within the past five years and shall be in possession of a valid certificate of instruction. If the individual designated as CQC System Manager does not currently meet this training requirement, it is mandatory that the training be successfully completed within ninety calendar days of appointment to the position of CQC System Manager. The Contractor's CQC System Manager may be appointed and serve fully in that capacity pending certification, providing all other qualifications are met. If the CQC System Manager fails to successfully complete the training, the Contractor shall promptly appoint a new CQC System Manager who shall then attend the next available course if he/she does not have a current course certification. The certification is valid for five years at which time retraining is required. If the Contractor needs this training, it will be provided by Government personnel after award of the contract. The cost for the training course shall be borne by the Contractor and will not exceed one hundred dollars (\$100.00) per course, per person. Payment shall be by check in advance of the training. The Contractor shall contact the Contracting Officer upon award of the contract to arrange for course participation.

3.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the

requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of the construction work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.
- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 48 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify

required control inspection and testing.

- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least 48 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

- e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.7.2 Testing Laboratories

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$3,500 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Corps of Engineers Division Laboratory, f.o.b., at the following address:

For delivery by mail:

USACE Research and Development Center
ATTN: Joe Tom, CEERD-SC-E
3909 Halls Ferry Road
Vicksburg, MS 39180-6199

For other deliveries: same as above

Coordination for each specific test, exact delivery location, and dates will be made through the Area Office.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the Special Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings

and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.

- f. Submittals reviewed, with contract reference, by whom, and action taken.
- g. Offsite surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/or specifications.
- j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- End of Section --

SECTION 01500A

TEMPORARY CONSTRUCTION FACILITIES
02/97

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

1.1.1 Site Plan

The Contractor shall prepare a site plan indicating the proposed location and dimensions of any area to be fenced and used by the Contractor, the number of trailers to be used, avenues of ingress/egress to the fenced area and details of the fence installation. Any areas which may have to be graveled to prevent the tracking of mud shall also be identified. The Contractor shall also indicate if the use of a supplemental or other staging area is desired.

1.1.2 Employee Parking

Contractor employees shall park privately owned vehicles in an area designated by the Contracting Officer. Contractor employee parking shall not interfere with existing and established parking requirements of the military installation.

1.2 AVAILABILITY AND USE OF UTILITY SERVICES

If determined that existing utility systems and supplies are adequate for the needs and use of the Contractor as well as the Government, all reasonable required amounts of water, gas and electricity will be available to the Contractor from existing outlets and supplies.

1.2.1 Payment for Utility Services

The Contractor shall enter into a utility agreement with the installation. The Government will make all reasonably required utilities available to the Contractor from existing outlets and supplies. The Installation will read the meter and bill the Contractor monthly for utilities used. The amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the Government.

1.2.2 Advance Deposit

An advance deposit for utilities consisting of an estimated month's usage or a minimum of \$50.00 will be required. The last monthly bills for the fiscal year will normally be offset by the deposit and adjustments will be billed or returned as appropriate. Services to be rendered for the next fiscal year, beginning 1 October, will require a new deposit. Notification of the due date for this deposit will be mailed to the Contractor prior to the end of the current fiscal year.

1.2.3 Final Meter Reading

Before completion of the work and final acceptance of the work by the Government, the Contractor shall notify the Contracting Officer, in writing, 5 working days before termination is desired. The Government will take a final meter reading, disconnect service, and remove the meters. The Contractor shall then remove all the temporary distribution lines, meter bases, and associated paraphernalia. The Contractor shall pay all outstanding utility bills before final acceptance of the work by the Government.

1.2.4 Sanitation

The Contractor shall provide and maintain within the construction area minimum field-type sanitary facilities approved by the Contracting Officer. Government toilet facilities will not be available to Contractor's personnel.

1.2.5 Telephone

The Contractor shall make arrangements and pay all costs for telephone facilities desired.

1.3 PROTECTION OF UTILITY LINES

(a) All requests for access must be made through the Contracting Officer's Representative (COR) or Resident Engineer. The Director of Installation Support will work directly with the Contracting Officer's Representative (COR) to provide timely information to the Contractor.

(b) The Contractor is responsible for checking and locating all the utilities in the field before construction. The cost of all these checks shall be included in the appropriate bid item. The Contractor may use utilities locator equipment or may hire a subcontractor to locate all the utilities for him. The Contractor shall furnish all labor, supervision, tools, equipment, and transportation as required to locate and mark utilities for the Fort Leavenworth-owned utilities excluding fiber/telephone and communications. The Contractor will be provided copies of applicable Fort Leavenworth DIS utility drawings to aid in locating water, sanitary sewer, storm sewer, electrical and natural gas. Only primary electrical is shown on post utility maps; secondary power such as building services and street light circuits are not shown. The Contractor shall be held totally responsible for the location of the electric lines and all other utilities listed above that are of metal or have tracer wires available for locating. The utilities that are of nonconductive construction such as plastic or Transite and have no tracer wire or other means of applying a signal are to be located from the utility maps. The utilities that are located from maps that appear to be in the vicinity of the excavation are to be hand dug for location purposes. If a line is damaged that is within 10 feet of that shown on the utility maps, the Contractor will be held responsible for its repair.

(c) The Contractor shall contact Kansas One-Call for utility checks for Southern Star, Westar Energy, Sprint, Southwestern Bell, and Time Warner Cable, or any other participating utility company.

(d) The Fort Leavenworth telephone and communications are to be located by Fort Leavenworth personnel. The Contractor shall visit the sites and mark his proposed route or limits to his excavation on a map and take this marked up map to DIS Help Desk in Building 85 (820 McClellan Ave.) before any excavation. The Directorate of Information Management (DOIM) will mark lines in the field within 10 working days, after which the Contractor shall proceed with actual excavation.

If the Contractor damages any marked lines during excavation, the Contractor shall contact the COR immediately to determine if the Post will repair the line with the Contractor reimbursing the Government for repairs, or if the Contractor will be required to repair the lines.

(e) After all utility locations or existence of any utility for the site are completed, the Contractor shall provide a copy of the summary to the COR for his review prior to start of any excavation as a daily report.

1.4 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

1.4.1 Bulletin Board

Immediately upon beginning of work, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size for displaying

the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

1.4.2 Project and Safety Signs

The requirements for the signs, their content, and location shall be as shown on the drawings included after this section. The signs shall be erected within 15 days after receipt of the notice to proceed. The data required by the safety sign shall be corrected daily, with light colored metallic or non-metallic numerals. Upon completion of the project, the signs shall be removed from the site.

1.5 PROTECTION AND MAINTENANCE OF TRAFFIC

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

1.5.1 Haul Roads

The Contractor shall, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. Haul roads shall be constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control shall be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and hauling roads shall be subject to approval by the Contracting Officer. Lighting shall be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations. Upon completion of the work, haul roads designated by the Contracting Officer shall be removed.

1.5.2 Barricades

The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

1.6 CONTRACTOR'S TEMPORARY FACILITIES

1.6.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

1.6.2 Storage Area

The Contractor shall construct a temporary 6 foot high chain link fence around trailers and materials. Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Trailers, materials, or equipment shall not be placed or stored outside the fenced area unless such trailers, materials, or equipment are assigned a separate and distinct storage area by the Contracting Officer away from the vicinity of the construction site but within the military boundaries. Trailers, equipment, or materials shall not be open to public view with the exception of those items which are in support of ongoing work on any given day. Materials shall not be stockpiled outside the fence in preparation for the next day's work. Mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks, and like equipment, shall be parked within the fenced area at the end of each work day.

1.6.3 Supplemental Storage Area

Upon Contractor's request, the Contracting Officer may designate another or supplemental area for the Contractor's use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site but shall be within the military boundaries. Fencing of materials or equipment will not be required at this site; however, the Contractor shall be responsible for cleanliness and orderliness of the area used and for the security of any material or equipment stored in this area.

1.6.4 Appearance of Trailers

Trailers utilized by the Contractor for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on the military property.

1.6.5 Maintenance of Storage Area

Fencing shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse, with construction equipment or other vehicles, grassed or unpaved areas which are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the Contractor's discretion. Grass located within the boundaries of the construction site shall be mowed for the duration of the project. Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers shall be edged or trimmed neatly.

1.6.6 Security Provisions

Adequate outside security lighting shall be provided at the Contractor's temporary facilities. The Contractor shall be responsible for the security of its own equipment; in addition, the Contractor shall notify the appropriate law enforcement agency requesting periodic security checks of the temporary project field office.

1.7 PLANT COMMUNICATION

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone

or other suitable devices. The devices shall be made available for use by Government personnel.

1.8 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Materials resulting from demolition activities which are salvageable shall be stored within the fenced area described above or at the supplemental storage area. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.


1.9 RESTORATION OF STORAGE AREA

Upon completion of the project and after removal of trailers, materials, and equipment from within the fenced area, the fence shall be removed and will become the property of the Contractor. Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

-- End of Section --

The graphic format for this 4'x 6' sign panel follows the legend guidelines and layout as specified below. The large 4'x 4' section of panel on the right is to be white with black legend. The 2'x 4' section of the sign on the left with the full Corps signature (reverse version) is to be screen printed Communications Red on the White background.

This sign is to be placed with the Safety Performance Sign (See Fig. 2).

3"	42"	3"		
4.5"	<div>Construction Supervised by</div>  <div>US Army Corps of Engineers</div> <div>Northwestern Division Kansas City District</div>	6"		
2"		4.5"		
6.25"		4.5"		
10.5"		6"		
2.5"		2.25"		
2"		9.5"		
		1.875"		
		1.875"		
		1.875"		
		1.875"		
	7.75"			
3"	21"	1"	21"	2"

Legend Group 1: One to two-line description of Corps relationship to project
Color: White
Typeface: 1.25" Helvetica Regular
Maximum line length: 19"

Legend Group 2: Division\ District Name Placed below 10.5" Reverse Signature (6" Castle).
Color: White
Typeface: 1.25" Helvetica Regular

Legend Group 3: One- to three-line project title legend describes the work being done under this contract.
Color: Black
Typeface: 3" Helvetica Bold
Maximum line length: 42"

Legend Group 4: One- to two-line identification of project or facility (civil works) or name of sponsoring department (military).
Color: Black
Typeface: 1.5" Helvetica Regular
Maximum line length: 42"

Cross-align the first line of Legend Group 4 with the first line of the Corps Signature (US Army Corps) as shown.

Legend Groups 5a-b: One- to five-line identification of prime contractors including: type (architect, general contractor, etc.), corporate or firm name, city, state. Use of Legend Group 5 is optional.
Color: Black
Typeface: 1.25" Helvetica Regular
Maximum line length: 21"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards

Sign Type	Legend Size	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-01	Various	4' x 6'	4" x 4"	HDO-3	48"	WH-RD/BK

CONSTRUCTION SIGN (CORPS OF ENGINEERS DESIGN)

(Use with Fig 2)

Fig. 1

SAFETY PERFORMANCE SIGN

Each contractor's safety record is to be posted on Corps managed or supervised construction projects and mounted with the construction project identification sign.

The graphic format, color, size and typefaces used on the sign are to be reproduced exactly as specified below. The title with First Aid logo in the top section of the sign and the performance record captions are standard for all signs of the type. Legend Groups 2 and 3 below identify the project and the contractor and are to be placed on the sign as shown.

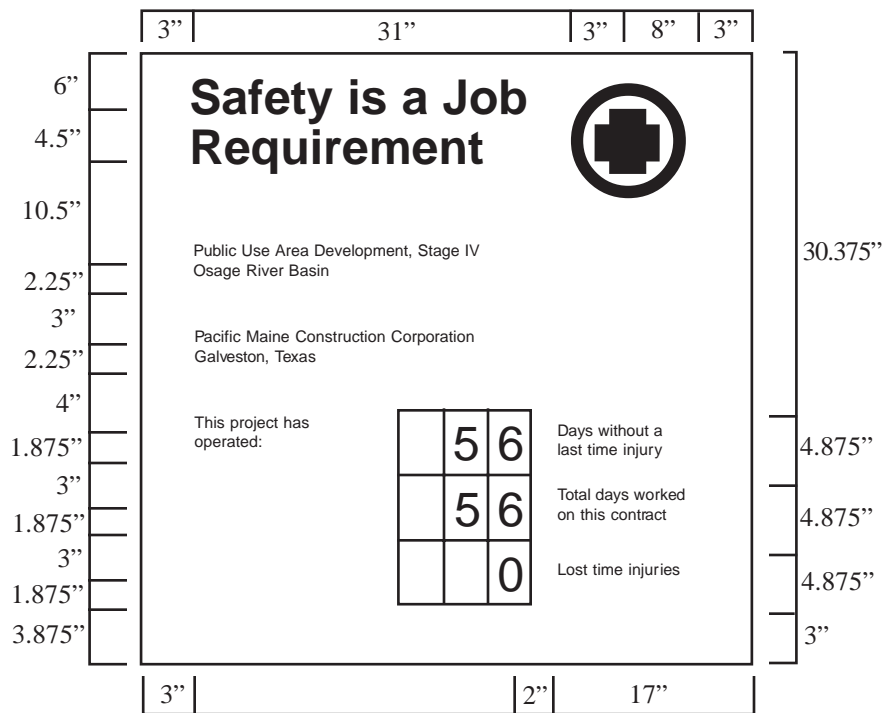
Safety record numbers are mounted on individual metal plates and are screw mounted to the background to allow for daily revisions to posted safety performance record.

Legend Group 1: Standard two-line title
 "Safety is a Job requirement" with (8 od.)
 Safety Green First Aid logo.
 Color: to match PMS 347
 Typeface: 3" Helvetica Bold
 Color: Black

Legend Group 2: One to two-line project
 title legend describes the work being done
 under this contract and name of host
 project.
 Color: Black
 Typeface: 1.5" Helvetica Regular
 Maximum line length: 42"

Legend Group 3: One to two-line iden-
 tification; name of prime contractor and
 city, state address.
 Color: Black
 Typeface: 1.5" Helvetica Regular
 Maximum line length: 42"

Legend Group 4: Standard safety record
 captions as shown.
 Color: Black
 Typeface: 12.5" Helvetica Regular



Sign Type	Legend Size	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-02	Various	4' X 4'	4" X 4"	HDO-3	48"	WH/BK - GR

Replaceable numbers are to be mounted on white .060 aluminum plates and screw-mounted to back-ground.
 Color: Black
 Typeface: 3" Helvetica Regular
 Plate size: 2.5" X 5"

All typography is flush left and rag right. Upper and lower case with initial capitals only as shown. Letter - and word - spacing to follow Corps standards.

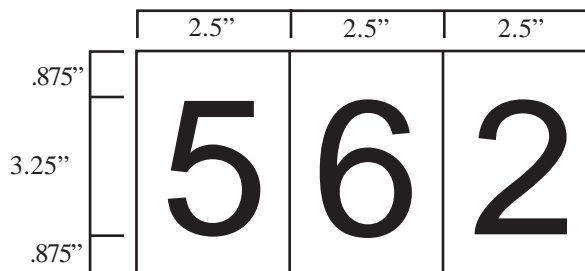


Fig. 2

SECTION 01525

SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS

11/02

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z359.1 (1999) Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components

ASME INTERNATIONAL (ASME)

ASME B30.5 (2000) Mobile and Locomotive Cranes

ASME B30.8 (2000) Floating Cranes and Floating Derricks

ASME B30.22 (2000) Articulating Boom Cranes

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR 1910 Safety and Health Regulation in General Industry

29 CFR 1910.94 Ventilation

29 CFR 1910.120 Hazardous Waste Operations and Emergency Response

29 CFR 1910.146 Permit-required Confined Spaces

29 CFR 1915 Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment

29 CFR 1926 Safety and Health Regulations for Construction

29 CFR 1926.65 Hazardous Waste Operations and Emergency Response

29 CFR 1926.500 Fall Protection

U. S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10 (1998) Portable Fire Extinguishers

NFPA 70 (2002) National Electrical Code

NFPA 241 (2000) Safeguarding Construction, Alteration, and Demolition Operations

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated.

When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G, RE.

Activity Hazard Analysis (AHA); G, RE.

Crane Critical Lift Plan; G, RE.

SD-06 Test Reports

Reports

Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."

Accident Reports

Monthly Exposure Reports

Submit monthly exposure reports by the 10th of the following month.

Regulatory Citations and Violations

Crane Reports

[Certificate of Compliance (Crane)]

SD-07 Certificates

Confined Space Entry Permit

Submit one copy of each permit attached to each Daily Quality Control Report.

1.3 DEFINITIONS

[a. Associate Safety Professional (ASP). An individual who is currently certified by the Board of Certified Safety Professionals.]

[b. Certified Construction Health & Safety Technician (CHST). An individual who is currently certified by the Board of Certified Safety Professionals.]

[c. Certified Industrial Hygienist (CIH). An individual who is currently certified by the American Board of Industrial Hygiene.]

[d. Certified Safety Professional (CSP). An individual who is currently certified by the Board of Certified Safety Professionals.]

[e. Certified Safety Trained Supervisor (STS). An individual who is currently certified by the Board of Certified Safety Professionals.]

f. High Visibility Accident. Any mishap which may generate publicity and/or high visibility.

g. Low-slope roof. A roof having a slope less than or equal to 4 in 12 (vertical to horizontal).

h. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even though provided by a physician or registered personnel.

i. Multi-Employer Work Site (MEWS). A multi-employer work site, as defined by OSHA, is one in which many employers occupy the same site. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors.

j. Operating Envelope. The area surrounding any crane. Inside this "envelope" is the crane, the operator, riggers, rigging gear between the hook and the load, the load and the crane's supporting structure (ground, rail, etc.).

k. Recordable Injuries or Illnesses. Any work-related injury or illness that results in:

- (1) Death, regardless of the time between the injury and death, or the length of the illness;
- (2) Days away from work;
- (3) Restricted work;
- (4) Transfer to another job;
- (5) Medical treatment beyond first aid;
- (6) Loss of consciousness; or
- (7) A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.

l. Site Safety and Health Officer (SSHO). The superintendent or other qualified or competent person who is responsible for the on-site safety and health required for the project. The Contractor quality control (QC) person cannot be the SSHO, even though the QC has safety inspection responsibilities as part of the QC duties.

m. Steep roof. A roof having a slope greater than 4 in 12 (vertical to horizontal).

n. "USACE" property and equipment specified in USACE EM 385-1-1 should be interpreted as Government property and equipment.

o. Weight Handling Equipment (WHE) Accident. A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; and collision, including unplanned contact between the load, crane, and/or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.).]

1.4 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this contract, work performed shall comply with USACE EM 385-1-1, and the following federal, state, and local laws, ordinances, criteria, rules and regulations: Kansas Department of Health and Environment . Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply.

1.5 DRUG PREVENTION PROGRAM

Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site. Ensure that no employee uses illegal drugs or consumes alcohol during work hours. Ensure there are no employees under the influence of drugs or alcohol during work hours. After accidents, collect blood, urine, or saliva specimens and test the injured and involved employees for the influence of drugs and alcohol. A copy of the test shall be made available to the Contracting Officer upon request.

1.6 SITE QUALIFICATIONS, DUTIES AND MEETINGS

1.6.1 Personnel Qualifications

1.6.1.1 Site Safety and Health Officer (SSHO)

Site Safety and Health Officer (SSHO) shall be provided at the work site at all times to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The SSHO shall meet the following requirements:

- [Level 1:
 Worked on similar projects.
 10-hour OSHA construction safety class or equivalent within last 3 years.
 Competent person training as needed.]
- [Level 2:
 A minimum of 3 years safety work on similar project.
 30-hour OSHA construction safety class or equivalent within last 3 years.
 Competent person training as needed.]
- [Level 3:
 A minimum of 5 years safety work on similar projects.
 30-hour OSHA construction safety class or equivalent within the last 5 years.
 An average of at least 24 hours of formal safety training each year for the past 5 years.
 Competent person training as needed.]
- [Level 4:
 A minimum of 10 years safety work of a progressive nature with at least 5 years of experience on similar projects.
 30-hour OSHA construction safety class or equivalent within the last 5 years.
 An average of at least 24 hours of formal safety training each year for the past 5 years with training for competent person status for at least the following [4] areas of competency: [Excavation]; [Scaffolding]; [Fall protection]; [Hazardous energy]; [Confined space]; [Health hazard recognition, evaluation and control of chemical, physical and biological agents]; [Personal protective equipment and clothing to include selection, use and maintenance]; [].]
- [Level 5:

An Associate Safety Professional (ASP), Certified Safety Trained Supervisor (STS) and/or Construction Health & Safety Technician (CHST). A minimum of 10 years safety work of a progressive nature with at least 5 years of experience on similar projects.

30-hour OSHA construction safety class or equivalent within the last 5 years.

An average of at least 24 hours of formal safety training each year for the past 5 years with training for competent person status for at least the following [4] areas of competency: [Excavation]; [Scaffolding]; [Fall protection]; [Hazardous energy]; [Confined space]; [Health hazard recognition, evaluation and control of chemical, physical and biological agents]; [Personal protective equipment and clothing to include selection, use and maintenance]; [].]

[Level 6: A

Certified Safety Professional (CSP) and/or Certified Industrial Hygienist (CIH).

A minimum of 10 years safety work of a progressive nature with at least 5 years of experience on similar projects.

30-hour OSHA construction safety class or equivalent within the last 5 years.

An average of at least 24 hours of formal safety training each year for the past 5 years with training for competent person status for at least the following [4] areas of competency: [Excavation]; [Scaffolding]; [Fall protection]; [Hazardous energy]; [Confined space]; [Health hazard recognition, evaluation and control of chemical, physical and biological agents]; [Personal protective equipment and clothing to include selection, use and maintenance]; [].]

1.6.1.2 Certified Safety Professional (CSP) and/or Certified Industrial hygienist (CIH)

Provide a Certified Industrial Hygienist (CIH) at the work site to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The CIH shall be the safety and occupational health "competent person" as defined by USACE EM 385-1-1.

1.6.1.3 Competent Person for Confined Space Entry

Provide a competent person meeting the requirements of EM 385-1-1 who is assigned in writing by the Designated Authority to assess confined spaces and who possesses demonstrated knowledge, skill and ability to:

- a. Identify the structure, location, and designation of confined and permit-required confined spaces where work is done;
- b. Calibrate and use testing equipment including but not limited to, oxygen indicators, combustible gas indicators, carbon monoxide indicators, and carbon dioxide indicators, and to interpret accurately the test results of that equipment;
- c. Perform all required tests and inspections specified in 29 CFR 1910.146 and 29 CFR 1915 Subpart B;
- d. Assess hazardous conditions including atmospheric hazards in confined space and adjacent spaces and specify the necessary protection and precautions to be taken;
- e. Determine ventilation requirements for confined space entries and operations;
- f. Assess hazards associated with hot work in confined and adjacent space and determine fire watch requirements; and,

- g. Maintain records required.

1.6.1.4 Competent Person for the Health Hazard Control and Respiratory Protection Program

Provide a competent person meeting the requirements of EM 385-1-1 who is:

- a. Capable by education, specialized training and/or experience of anticipating, recognizing, and evaluating employee exposure to hazardous chemical, physical and biological agents in accordance with USACE EM 385-1-1, Section 6.
- b. Capable of specifying necessary controls and protective actions to ensure worker health.

1.6.1.5 Crane Operators

Crane operators shall meet the requirements in USACE EM 385-1-1, Appendix G.

1.6.2 Personnel Duties

1.6.2.1 Site Safety and Health Officer (SSHO)/Superintendent

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Safety inspection logs shall be attached to the Contractors' daily [production][quality control] report.
- b. Conduct mishap investigations and complete required reports. Maintain the OSHA Form 300 and Daily Production reports for prime and sub-contractors.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic in-progress meetings.
- e. Implement and enforce accepted APPS and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. A list of unresolved safety and health deficiencies shall be posted on the safety bulletin board.
- g. Ensure sub-contractor compliance with safety and health requirements.

Failure to perform the above duties will result in dismissal of the superintendent and/or SSHO, and a project work stoppage. The project work stoppage will remain in effect pending approval of a suitable replacement.

1.6.2.2 Certified Industrial Hygienist (CIH)

- a. Perform safety and occupational health management, surveillance, inspections, and safety enforcement for the project.
- b. Perform as the safety and occupational health "competent person" as defined by USACE EM 385-1-1.
- c. Be on site at all times whenever work or testing is being performed.
- d. Conduct and document safety inspections.
- e. Shall have no other duties other than safety and occupational health

management, inspections, and enforcement on this contract.

If the CIH is appointed as the SSHO, all duties of that position shall also be performed.

1.6.3 Meetings

1.6.3.1 Preconstruction Conference

a. The Contractor will be informed, in writing, of the date of the preconstruction conference. The purpose of the preconstruction conference is for the Contractor and the Contracting Officer's representatives to become acquainted and explain the functions and operating procedures of their respective organizations and to reach mutual understanding relative to the administration of the overall project's APP before the initiation of work.

b. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP (including the AHAs and special plans, program and procedures associated with it).

c. The Contractor shall discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated activity hazard analyses (AHAs) that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer's representative as to which phases will require an analysis. In addition, a schedule for the preparation, submittal, review, and acceptance of AHAs shall be established to preclude project delays.

d. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Work shall not begin until there is an accepted APP.

1.6.3.2 Weekly Safety Meetings

Conduct weekly safety meetings at the project site for all employees. The Contracting Officer will be informed of the meeting in advance and be allowed attendance. Minutes showing contract title, signatures of attendees and a list of topics discussed shall be attached to the Contractors' daily quality control report.

1.6.3.3 Work Phase Meetings

The appropriate AHA shall be reviewed and attendance documented by the Contractor at the preparatory and initial phases of quality control inspection. The analysis should be used during daily inspections to ensure the implementation and effectiveness of safety and health controls.

1.7 TRAINING

1.7.1 New Employee Indoctrination

New employees (prime and sub-contractor) will be informed of specific site hazards before they begin work. Documentation of this orientation shall be kept on file at the project site.

1.7.2 Periodic Training

Provide Safety and Health Training in accordance with USACE EM 385-1-1 and the accepted APP. Ensure all required training has been accomplished for all onsite employees.

1.7.3 Training on Activity Hazard Analysis (AHA)

Prior to beginning a new phase, training will be provided to all affected employees to include a review of the AHA to be implemented.

1.8 ACCIDENT PREVENTION PLAN (APP)

The Contractor shall use a qualified person to prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of USACE EM 385-1-1 and as supplemented herein. Cover all paragraph and subparagraph elements in USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Preparation of Accident Prevention Plan". Where a paragraph or subparagraph element is not applicable to the work to be performed indicate "Not Applicable" next to the heading. Specific requirements for some of the APP elements are described below at paragraph 1.8.1. The APP shall be job-specific and shall address any unusual or unique aspects of the project or activity for which it is written. The APP shall interface with the Contractor's overall safety and health program. Any portions of the Contractor's overall safety and health program referenced in the APP shall be included in the applicable APP element and made site-specific. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer and any designated CSP and/or CIH.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP. The Contracting Officer reviews and comments on the Contractor's submitted APP and accepts it when it meets the requirements of the contract provisions.

Once accepted by the Contracting Officer, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO and quality control manager. Should any unforeseen hazard become evident during the performance of work, the project superintendent shall inform the Contracting Officer, both verbally and in writing, for resolution as soon as possible. In the interim, all necessary action shall be taken by the Contractor to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment.

Copies of the accepted plan will be maintained at the Area Engineer's office and at the job site. The APP shall be continuously reviewed and amended, as necessary, throughout the life of the contract. Unusual or high-hazard activities not identified in the original APP shall be incorporated in the plan as they are discovered.

1.8.1 EM 385-1-1 Contents

In addition to the requirements outlines in Appendix A of USACE EM 385-1-1, the

following is required:

a. Names and qualifications (resumes including education, training, experience and certifications) of all site safety and health personnel designated to perform work on this project to include the designated site safety and health officer and other competent and qualified personnel to be used such as CSPs, CIHs, STSs, CHSTs. The duties of each position shall be specified.

b. Qualifications of competent and of qualified persons. As a minimum, competent persons shall be designated and qualifications submitted for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; personal protective equipment and clothing to include selection, use and maintenance.

c. Confined Space Entry Plan. Develop a confined space entry plan in accordance with USACE EM 385-1-1, applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, and any other federal, state and local regulatory requirements identified in this contract. Identify the qualified person's name and qualifications, training, and experience. Delineate the qualified person's authority to direct work stoppage in the event of hazardous conditions. Include procedure for rescue by contractor personnel and the coordination with emergency responders. (If there is no confined space work, include a statement that no confined space work exists and none will be created.)

d. Health Hazard Control Program. The Contractor shall designate a competent and qualified person to establish and oversee a Health Hazard Control Program in accordance with USACE EM 385-1-1, Section 6. The program shall ensure that employees, on-site Government representatives, and others, are not adversely exposed to chemical, physical and biological agents and that necessary controls and protective actions are instituted to ensure health.

[e. Crane Critical Lift Plan. Prepare and sign weight handling critical lift plans for lifts over 75 percent of crane hoist's maximum load limit; lifts involving more than one crane or hoist; lifts of personnel; and technically difficult lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks in accordance with USACE EM 385-1-1, paragraph 16.c.18. and submit 15 calendar days prior to on-site work.]

f. Alcohol and Drug Abuse Plan

(1) Describe plan for random checks and testing with pre-employment screening in accordance with the DFAR Clause subpart 252.223-7004, "Drug Free Work Force."

(2) Description of the on-site prevention program

g. Fall Protection and Prevention (FP&P) Plan. The plan shall be site specific and address all fall hazards in the work place and during different phases of construction. It shall address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 1.8 m (6 feet). A qualified person shall prepare and sign the plan. The plan shall include fall protection and prevention systems, equipment and methods employed for every phase of work, responsibilities, rescue and escape equipment and operations, training requirements, and monitoring methods. Fall Protection and Prevention Plan shall be revised [every six months] for lengthy projects, reflecting any changes during the course of construction due to changes in personnel, equipment, systems or work habits. The accepted Fall Protection and Prevention Plan shall be kept and maintained at the job site for the duration of the project.

h. Lead Abatement Plan. The safety and health aspects of lead-based paint removal, prepared in accordance with Section 13281A, Lead Hazard Control Activities.]

i. Lead Work Plan. The safety and health aspects of lead work, prepared in accordance with Section 13282N, "Lead in Construction".]

j. Asbestos Hazard Abatement Plan. The safety and health aspects of asbestos work, prepared in accordance with Section 13280A, Asbestos Abatement.

k. Site Safety, Health and Emergency Response Plan. The safety and health aspects prepared in accordance with Section 01351A.]

l. PCB Plan. The safety and health aspects of Polychlorinated Biphenyls work, prepared in accordance with Sections 13284N, "Removal and Disposal of Polychlorinated Biphenyls (PCBs) and 13285N, "Removal and Disposal of PCB Contaminated Soils)".]

[m. Site Demolition Plan. The safety and health aspects prepared in accordance with Section [02220A, Demolition][02220, "Site Demolition" and referenced sources]] [Include engineering survey as applicable.]

n. Excavation Plan. The safety and health aspects prepared in accordance with Section 02302N, Backfilling, and Compacting for Utilities.]

o. Training Records and Requirements. List of mandatory training and certifications which are applicable to this project (e.g. explosive actuated tools, confined space entry, fall protection, crane operation, vehicle operator, forklift operators, personal protective equipment); list of requirements for periodic retraining/certification; outline requirements for supervisory and employee safety meetings.

1.9 ACTIVITY HAZARD ANALYSIS (AHA)

The Activity Hazard Analysis (AHA) format shall be in accordance with USACE EM 385-1-1. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHA as amendments to the APP. An AHA will be developed by the Contractor for every operation involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or subcontractor is to perform work. The analysis must identify and evaluate hazards and outline the proposed methods and techniques for the safe completion of each phase of work. At a minimum, define activity being performed, sequence of work, specific safety and health hazards anticipated, control measures (to include personal protective equipment) to eliminate or reduce each hazard to acceptable levels, equipment to be used, inspection requirements, training requirements for all involved, and the competent person in charge of that phase of work. For work with fall hazards, including fall hazards associated with scaffold erection and removal, identify the appropriate fall arrest systems. For work with materials handling equipment, address safeguarding measures related to materials handling equipment. For work requiring excavations, include requirements for safeguarding excavations. An activity requiring an AHA shall not proceed until the AHA has been accepted by the Contracting Officer's representative and a meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activity, including on-site Government representatives. The Contractor shall document meeting attendance at the preparatory, initial, and follow-up phases of quality control inspection. The AHA shall be continuously reviewed and, when appropriate, modified to address changing site conditions or operations. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

The AHA list will be reviewed periodically (at least monthly) at the Contractor

supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.

Activity hazard analyses shall be updated as necessary to provide an effective response to changing work conditions and activities. The on-site superintendent, site safety and health officer and competent persons used to develop the AHAs, including updates, shall sign and date the AHAs before they are implemented.

1.10 DISPLAY OF SAFETY INFORMATION

Within 5 calendar days after commencement of work, erect a safety bulletin board at the job site. The following information shall be displayed on the safety bulletin board in clear view of the on-site construction personnel, maintained current, and protected against the elements and unauthorized removal:

- a. Map denoting the route to the nearest emergency care facility.
- b. Emergency phone numbers.
- c. Copy of the most up-to-date APP.
- d. AHA(s).
- e. OSHA 300A Form.
- f. Confined space entry permit.
- g. A sign indicating the number of hours worked since last lost workday accident.]
- h. OSHA Safety and Health Protection-On-The-Job Poster.
- i. Safety and Health Warning Posters.]

1.11 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturer's manuals.

1.12 EMERGENCY MEDICAL TREATMENT

Contractors will arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment.

1.13 REPORTS

1.13.1 Accident Reports

For recordable injuries and illnesses, and property damage accidents resulting in at least \$2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the USACE Accident Report Form 3394 and provide the report to the Contracting Officer within 1 calendar day(s) of the accident. The Contracting Officer will provide copies of any required or special forms.

1.13.2 Accident Notification

Notify the Contracting Officer as soon as practical, but not later than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than \$2,000, or any weight handling equipment accident involving a overturned crane, collapsed boom, or any other major damage to the crane or adjacent property.

Information shall include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (to include type of construction equipment used, PPE used, etc.). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on site and Government investigation is conducted.

1.13.3 Monthly Exposure Reports

Monthly exposure reporting to the Contracting Officer is required to be provided on or before the 10th of the following month. No billing will be processed until the MSER is turned in. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. The Contracting Officer will provide copies of any special forms.

1.13.4 Regulatory Citations and Violations

Contact the Contracting Officer immediately of any OSHA or other regulatory agency inspection or visit, and provide the Contracting Officer with a copy of each citation, report, and contractor response. Correct violations and citations promptly and provide written corrective actions to the Contracting Officer.

1.13.5 Crane Reports

Submit crane inspection reports required in accordance with USACE EM 385-1-1, Appendix H and as specified herein with Daily Reports of Inspections.

[1.13.6 Certificate of Compliance

The Contractor shall provide a Certificate of Compliance for each crane entering an activity under this contract (see Contracting Officer for a blank certificate). Certificate shall state that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance shall comply with 29 CFR 1926 and USACE EM 385-1-1 section 16 and Appendix H. Certify on the Certificate of Compliance that the crane operator(s) is qualified and trained in the operation of the crane to be used. The Contractor shall also certify that all of its crane operators working on the DOD activity have been trained in the proper use of all safety devices (e.g., anti-two block devices). These certifications shall be posted on the crane.

]1.14 HOT WORK

Prior to performing "Hot Work" (welding, etc.) or operating other flame-producing devices, a written permit shall be requested from the Fort Leavenworth Fire Chief. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. The Contractor will provide at least two (2) twenty (20) pound 4A:20 BC rated extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity.

a. Oil painting materials (paint, brushes, empty paint cans, etc.), and all flammable liquids shall be removed from the facility at quitting time. All painting materials and flammable liquids shall be stored outside in a suitable metal locker or box and will require re-submittal with non-hazardous materials.

b. Accumulation of trays, paper, shavings, sawdust, boxes and other packing materials shall be removed from the facility at the close of each workday and such material disposed of in the proper containers located away from the facility.

- c. The storage of combustible supplies shall be a safe distance from structures.
- d. Area outside the facility undergoing work shall be cleaned of trash, paper, or other discarded combustibles at the close of each workday.
- e. All portable electric devices (saws, sanders, compressors, extension chord, lights, etc.) shall be disconnected at the close of each workday. When possible, the main electric switch in the facility shall be deactivated.
- f. When starting work in the facility, Contractors shall require their personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency 911 phone number. ANY FIRE, NO MATTER HOW SMALL, SHALL BE REPORTED TO THE RESPONSIBLE FIRE DEPARTMENT IMMEDIATELY.

PART 2 PRODUCTS

2.1 FALL PROTECTION ANCHORAGE

Fall protection anchorage, conforming to ANSI Z359.1, will be left in place and so identified for continued customer use.

2.2 CONFINED SPACE SIGNAGE

The Contractor shall provide permanent signs integral to or securely attached to access covers for new permit-required confined spaces. Signs wording: "DANGER--PERMIT-REQUIRED CONFINED SPACE - DO NOT ENTER -" in bold letters a minimum of 25 mm(one inch) in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" shall be red and readable from 1.52 m(5 feet).

PART 3 EXECUTION

3.1 CONSTRUCTION AND/OR OTHER WORK

The Contractor shall comply with USACE EM 385-1-1, NFPA 241, the APP, the AHA, and other related submittals and activity fire and safety regulations.

3.1.1 Hazardous Material Use

Each hazardous material must receive approval prior to being brought onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material.

Any work or storage involving hazardous chemicals or materials must be done in a manner that will not expose Government or Contractor employees to any unsafe or unhealthful conditions. Adequate protective measures must be taken to prevent Government or Contractor employees from being exposed to any hazardous condition that could result from the work or storage. The Prime Contractor shall keep a complete inventory of hazardous materials brought onto the work-site. Approval by the Contracting Officer of protective measures and storage area is required prior to the start of the work.

3.1.2 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint are prohibited. The Contracting Officer, upon written request by the Contractor, may

consider exceptions to the use of any of the above excluded materials.

3.1.3 Unforeseen Hazardous Material

The design should have identified materials such as PCB, lead paint, and friable and non-friable asbestos. If [additional] material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

3.2 PRE-OUTAGE COORDINATION MEETING

Contractors are required to apply for utility outages at least 15 days in advance. As a minimum, the request should include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Special requirements for electrical outage requests are contained elsewhere in this specification section. Once approved, and prior to beginning work on the utility system requiring shut down, the Contractor shall attend a pre-outage coordination meeting with the Contracting Officer to review the scope of work and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

3.3 FALL HAZARD PROTECTION AND PREVENTION

The Contractor shall establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. The program shall include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and escape procedures.

3.3.1 Training

The Contractor shall institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, the Contractor shall provide training for each employee who might be exposed to fall hazards. Training requirements shall be in accordance with USACE EM 385-1-1, section 21.A.16.

3.3.2 Fall Protection Equipment

The Contractor shall enforce use of the fall protection equipment designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee is on a surface 1.8 m(6 feet) or more above lower levels. Fall protection systems such as guardrails, personnel fall arrest system, safety nets, etc., are required when working within 1.8m (6 feet) of any leading edge. In addition to the required fall protection systems, safety skiff, personal floatation devices, life rings etc., are required when working above or next to water in accordance with USACE EM 385-1-1, paragraphs 05.I. and 05.J. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall arrest systems may be required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. Fall protection must comply with 29 CFR 1926.500, Subpart M and USACE EM 385-1-1.

3.3.2.1 Personal Fall Arrest Equipment

Personal fall arrest equipment, systems, subsystems, and components shall meet

ANSI Z359.1. Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 1.8 m (6 feet). The total fall distance shall always be taken into consideration when attaching a person to a fall arrest system.

3.3.3 Fall Protection for Roofing Work

Fall protection controls shall be implemented based on the type of roof being constructed and work being performed. The roof area to be accessed shall be evaluated for its structural integrity including weight-bearing capabilities for the projected loading.

a. Low Sloped Roofs:

(1) For work within 1.8 m (6 feet) of an edge, on low-slope roofs, personnel shall be protected from falling by use of personal fall arrest systems, guardrails, or safety nets. A safety monitoring system is not adequate fall protection and is not authorized.

(2) For work greater than 1.8 m (6 feet) from an edge, warning lines shall be erected and installed in accordance with 29 CFR 1926.500 and USACE EM 385-1-1.

b. Steep Roofs: Work on steep roofs requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also includes residential or housing type construction.

3.3.4 Safety Nets

If safety nets are used as the selected fall protection system on the project, they shall be provided at unguarded workplaces, over water, machinery, dangerous operations and leading edge work. Safety nets shall be tested immediately after installation with a drop test of 181.4 kg (400 pounds) and every six months thereafter.

3.3.5 Existing Anchorage

Existing anchorages, to be used for attachment of personal fall arrest equipment, shall be certified (or re-certified) by a qualified person in accordance with ANSI Z359.1.

3.3.6 Horizontal Lifelines

Horizontal lifelines shall be designed, installed, certified and used under the supervision of a qualified person as part of a complete fall arrest system (29 CFR 1926.500).

3.4 SCAFFOLDING

Employees shall be provided with a safe means of access to the work area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Access to scaffold platforms greater than 6 m (20 feet) in height shall be accessed by use of a scaffold stair system. Vertical ladders commonly provided by scaffold system manufacturers shall not be used for accessing scaffold platforms greater than 6 m (20 feet) in height. The use of an adequate gate is required. Contractor shall ensure that employees are qualified

to perform scaffold erection and dismantling. Do not use scaffold without the capability of supporting at least four times the maximum intended load or without appropriate fall protection as delineated in the accepted fall protection and prevention plan. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward. Special care shall be given to ensure scaffold systems are not overloaded. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material is prohibited. The first tie-in shall be at the height equal to 4 times the width of the smallest dimension of the scaffold base. Work platforms shall be placed on mud sills. Scaffold or work platform erectors shall have fall protection during the erection and dismantling of scaffolding or work platforms that are more than six feet. Delineate fall protection requirements when working above six feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

3.5 EQUIPMENT

3.5.1 Material Handling Equipment

- a. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.
- b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.
- c. Operators of forklifts or power industrial trucks shall be licensed in accordance with OSHA.

3.5.2 Weight Handling Equipment

- [a. Cranes must be equipped with:
 - (1) Load indicating devices (LIDs) and a boom angle or radius indicator,
 - (2) or load moment indicating devices (LMIs).
 - (3) Anti-two block prevention devices.
 - (4) Boom hoist hydraulic relief valve, disconnect, or shutoff (stops hoist when boom reaches a predetermined high angle).
 - (5) Boom length indicator (for telescoping booms).
 - (6) Device to prevent uncontrolled lowering of a telescoping hydraulic boom.
 - (7) Device to prevent uncontrolled retraction of a telescoping hydraulic boom.]
- b. The Contractor shall notify the Contracting Officer 15 days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Contractor's operator shall remain with the crane during the spot check.
- c. The Contractor shall comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Erection shall be performed under the supervision of a designated person (as defined in ASME B30.5). All testing shall be performed in accordance with the manufacturer's recommended procedures.
- d. The Contractor shall comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes and ASME B30.8 for floating

cranes and floating derricks.

e. The presence of Government personnel does not relieve the Contractor of an obligation to comply with all applicable safety regulations. The Government will investigate all complaints of unsafe or unhealthful working conditions received in writing from contractor employees, federal civilian employees, or military personnel.

f. Each load shall be rigged/attached independently to the hook/master-link in such a fashion that the load cannot slide or otherwise become detached. Christmas-tree lifting (multiple rigged materials) is not allowed.

g. Under no circumstance shall a Contractor make a lift at or above 90% of the cranes rated capacity in any configuration.

h. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of USACE EM 385-1-1 section 11 and ASME B30.5 or ASME B30.22 as applicable.

i. Crane suspended personnel work platforms (baskets) shall not be used unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Personnel shall not be lifted with a line hoist or friction crane.

j. A fire extinguisher having a minimum rating of 10BC and a minimum nominal capacity of 5lb of extinguishing agent shall be available at all operator stations or crane cabs. Portable fire extinguishers shall be inspected, maintained, and recharged as specified in NFPA 10, Standard for Portable Fire Extinguishers.

k. All employees shall be kept clear of loads about to be lifted and of suspended loads.

l. A weight handling equipment operator shall not leave his position at the controls while a load is suspended.

m. Only Contractor crane operators who have met the requirements of 29 CFR 1910.94, 29 CFR 1910.120, 29 CFR 1926.65, 29 CFR 1926.500, USACE EM 385-1-1, ASME B30.5, and ASME B30.22 and other local and state requirements shall be authorized to operate the crane.

n. The Contractor shall use cribbing when performing lifts on outriggers.

o. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.

p. A physical barricade must be positioned to prevent personnel from entering the counterweight swing (tail swing) area of the crane.

q. A substantial and durable rating chart containing legible letters and figures shall be provided with each crane and securely mounted onto the crane cab in a location allowing easy reading by the operator while seated in the control station.

r. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by Contracting Officer personnel.

s. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.

t. The Contractor shall certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

3.5.3 Equipment and Mechanized Equipment

a. Equipment shall be operated by designated qualified operators. Proof of qualifications shall be kept on the project site for review.

b. Manufacture specifications or owner's manual for the equipment shall be on site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA or USACE EM 385-1-1. Such additional safety precautions or requirements shall be incorporated into the AHAs.

c. Equipment and mechanized equipment shall be inspected in accordance with manufacturer's recommendations for safe operation by a competent person prior to being placed into use.

d. Daily checks or tests shall be conducted and documented on equipment and mechanized equipment by designated competent persons.

3.6 EXCAVATIONS

The competent person for excavations performed as a result of contract work shall be on-site when excavation work is being performed, and shall inspect, and document the excavations daily prior to entry by workers. The competent person must evaluate all hazards, including atmospheric, that may be associated with the work, and shall have the resources necessary to correct hazards promptly.

3.6.1 Utility Locations

Prior to digging, the appropriate digging permit must be obtained. All underground utilities in the work area must be positively identified by a private utility locating service in addition to any station locating service and coordinated with the station utility department. Any markings made during the utility investigation must be maintained throughout the contract.

3.6.2 Utility Location Verification

The Contractor must physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system. Digging within .061 m (2 feet) of a known utility must not be performed by means of mechanical equipment; hand digging shall be used. If construction is parallel to an existing utility the utility shall be exposed by hand digging every 30.5 m (100 feet) if parallel within 1.5 m (5 feet) of the excavation.

3.6.3 Utilities with Concrete Slabs

Utilities located within concrete slabs or pier decks, bridges, and the like are extremely difficult to identify. The location must be coordinated with station utility departments in addition to a private locating service. Outages on system utilities shall be used in circumstances where concrete chipping, saw cutting, or core drilling is required and utilities are unable to be completely identified.

3.6.4 Shoring Systems

Trench and shoring systems must be identified in the accepted safety plan and AHA. Manufacture tabulated data and specifications or registered engineer tabulated data for shoring or benching systems shall be readily available on site for review. Job-made shoring or shielding shall have the registered professional engineer stamp, specifications, and tabulated data. Extreme care must be used when excavating near direct burial electric underground cables.

3.6.5 Trenching Machinery

Trenching machines with digging chain drives shall be operated only when the spotters/laborers are in plain view of the operator. Operator and spotters/laborers shall be provided training on the hazards of the digging chain drives with emphasis on the distance that needs to be maintained when the digging chain is operating. Documentation of the training shall be kept on file at the project site.

3.7 ELECTRICAL

3.7.1 Conduct of Electrical Work

Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables that will be cut must be positively identified and de-energized prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with the Contracting Officer and Station Utilities for identification. The Contracting Officer will not accept an outage request until the Contractor satisfactorily documents that the circuits have been clearly identified. Perform all high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator will be allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method. When working in energized substations, only qualified electrical workers shall be permitted to enter. When work requires Contractor to work near energized circuits as defined by the NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. Insulating blankets, hearing protection, and switching suits may be required, depending on the specific job and as delineated in the Contractor's AHA.

3.7.2 Portable Extension Cords

Portable extension cords shall be sized in accordance with manufacturer ratings for the tool to be powered and protected from damage. All damaged extension cords shall be immediately removed from service. Portable extension cords shall meet the requirements of NFPA 70.

3.8 WORK IN CONFINED SPACES

The Contractor shall comply with the requirements in Section 06.I of USACE EM 385-1-1 and OSHA 29 CFR 1910.146. Any potential for a hazard in the confined space requires a permit system to be used.

a. Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. (See Section 06.I.05 of USACE EM 385-1-1 for entry procedures.) All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.

b. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.

c. Ensure the use of rescue and retrieval devices in confined spaces greater than 1.5 m (5 feet) in depth. Conform to Sections 06.I.09, 06.I.10 and 06.I.11 of USACE EM 385-1-1.

d. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

e. Include training information for employees who will be involved as entrants and attendants for the work. Conform to Section 06.I.06 of USACE EM 385-1-1.

f. Daily Entry Permit. Post the permit in a conspicuous place close to the confined space entrance.

3.9 CRYSTALLINE SILICA

Grinding, abrasive blasting, and foundry operations of construction materials containing crystalline silica, shall comply with OSHA regulations, such as 29 CFR 1910.94, and USACE EM 385-1-1, Appendix C. The Contractor shall develop and implement effective exposure control and elimination procedures to include dust control systems, engineering controls, and establishment of work area boundaries, as well as medical surveillance, training, air monitoring, and personal protective equipment.

3.10 HOUSEKEEPING

3.10.1 Clean-Up

All debris in work areas shall be cleaned up daily or more frequently if necessary. Construction debris may be temporarily located in an approved location, however garbage accumulation must be removed each day.

3.10.2 Dust control

In addition to the dust control measures required elsewhere in the contract documents, dry cutting of brick or masonry shall be prohibited. [The Contracting Officer, upon written request by the Contractor, may consider exceptions to this prohibition on a case-by-case basis.] Wet cutting must address control of water run off.

-- End of Section --

SECTION 01567

NPDES PERMIT REQUIREMENTS FOR STORM WATER
DISCHARGES FROM CONSTRUCTION SITES

PART 1 GENERAL (Not Applicable)

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall be responsible for implementing the terms and requirements of the attached "Kansas Water Pollution Control General Permit and Authorization to Discharge Stormwater Runoff From Construction Activities" (hereafter referred to as the "Permit") as specified below. The Government shall be the permittee. The Government has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications. The Contractor shall have day-to-day operational control of those activities which are necessary to ensure compliance with the requirements specified herein. The Government shall be responsible for all submissions to the State. The Government shall retain the official copy of all documents pertaining to compliance with the Permit during construction. The project site is not located in designated critical habitat and there are no known "listed species" located in the project area.

3.2 IMPLEMENTATION

3.2.1 Notice of Intent

The Government shall complete and submit the Notice of Intent (NOI) in accordance with the Permit and pay the annual permit fee. The Contractor may not begin land disturbance activities until authorized by the Contracting Officer's Representative (COR).

3.2.2 Storm Water Pollution Prevention Plan

Unless otherwise indicated, the Contractor shall be responsible for implementing all measures described in the Storm Water Pollution Prevention Plan (SWPPP). The Contractor shall sign the Contractor's Certification. The Contractor's Certification shall be submitted to the COR at least 2 days prior to beginning land disturbance activities. The Government will be responsible for making any required modifications to the SWPPP.

3.2.3 Inspections and Reporting

The Contractor shall be responsible for all inspections specified in the SWPPP and the Permit. The Contractor shall also prepare all reports summarizing the inspections as required by the SWPPP and the Permit. The Government shall sign the reports. Copies of inspection reports shall be furnished to the COR for attachment to the SWPPP no more than 2 days after each inspection. The Contractor shall notify the COR within 24 hours if an inspection identifies any incidents of non-compliance with the SWPPP and the Permit.

3.2.4 Maintenance

The Contractor shall be responsible for maintaining all erosion and sediment control measures and other protective measures identified in the SWPPP in an

effective operating condition. The Government reserves the right to require the Contractor to perform maintenance on erosion and sediment control measures and other protective measures if the COR determines that environmental protection requirements are not being met.

3.2.5 Notice of Termination

The Contractor shall notify the COR within 2 days after final stabilization on all portions of the site has been achieved in accordance with Part VII of the Permit. The Government shall complete and submit the Notice of Termination to the State.

3.2.6 Retention of Records

The Government shall be responsible for retaining copies of the permit, SWPPP, site inspection records, Contractor's certifications, NOI, and NOT in accordance with the Permit.

-- End of Section --



K A N S A S

RODERICK L. SREMBY, SECRETARY

DEPARTMENT OF HEALTH AND ENVIRONMENT

KATHLEEN SEBELIUS, GOVERNOR

Re: Construction Stormwater Permit
Kansas Water Pollution Control General Permit No. S-MCST-0110-1

Dear Permittee:

Enclosed is the authorization to discharge stormwater runoff under the construction stormwater general permit at the construction site described therein. While copies of the authorization to discharge may be made, please retain the original authorization to discharge for your records.

Please review the construction stormwater general permit carefully since the authorization to discharge obligates the facility to meet the permit requirements.

The construction stormwater general permit, application forms, instructions and other forms are available on the KDHE Stormwater Website at www.kdhe.state.ks.us/stormwater. Hard copies are also available upon request.

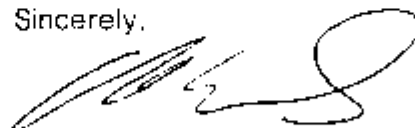
The general permit fee of \$60 is an annual permit fee due each year for the duration of the project. In accordance with K.A.R. 28-16-56d(b)(5) the general permit fee must be paid annually to maintain coverage under the construction stormwater general NPDES permit. The annual general permit fee is due each year on the anniversary of the effective date of the authorization to discharge until a Notice of Termination (NOT) has been authorized by KDHE. Annual fee payments should be accompanied by a copy of the authorization to discharge for the associated project. Checks for annual fees should be made payable to KDHE.

Please remember to submit an NOT, and a copy of the authorization to discharge, when the soil disturbing activities have been completed and final stabilization has been achieved. To stop paying the annual general permit fee under the construction stormwater general permit, KDHE must authorize the Notice of Termination (NOT) to terminate permit coverage when final stabilization has been completed. After KDHE has authorized the NOT, permit coverage is terminated and the annual general permit fee is no longer required.

The enclosed authorization to discharge does not relieve the permittee of the responsibility to obtain coverage under the construction stormwater general permit for future construction activities that are subject to stormwater permitting requirements.

We appreciate your efforts to comply with the stormwater pollution prevention program, and thereby to help us protect the water quality of the State of Kansas. If you have any questions about the enclosed authorization to discharge, or coverage under the general permit, please contact me at abrooks@kdhe.state.ks.us or (785) 296-5549.

Sincerely,



Alan W. Brooks, P.E.
Industrial Programs Section
Bureau of Water

Enclosures

pc: Stormwater Correspondence File

c:\stormwater\new.doc letter.wpd



See Attached Sheet for Instructions

NOTICE OF INTENT (NOI)
For Stormwater Runoff from Construction Activities
Authorized by a Kansas Water Pollution Control General Permit
Under the National Pollutant Discharge Elimination System

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form requests authorization for coverage under the Kansas Water Pollution Control general permit, or KDHE authorized successors, issued for stormwater runoff from construction activities in the State of Kansas. Becoming a permittee obligates the discharger to comply with the terms and conditions of the general permit. **Completion of this NOI does not provide automatic coverage under the general permit. Coverage is provided and discharge permitted when the Kansas Department of Health and Environment (KDHE) authorizes the NOI. A signed and dated copy of the authorized NOI will be provided to the owner or operator.** Upon authorization of the NOI, a Kansas permit number and a Federal permit number will be assigned to the construction project. **ONLY COMPLETE APPLICATIONS ACCOMPANIED BY THE \$60 ANNUAL PERMIT FEE WILL BE PROCESSED. KDHE WILL NOTIFY APPLICANTS WHOSE APPLICATIONS ARE INCOMPLETE, DEFICIENT, OR DENIED.** Please Print or Type.

I. OWNER OR OPERATOR ADDRESS & RECORD LOCATION INFORMATION

Owner or Operator's Name U.S. Army Engineer District Owner's Contact Name David Werner
Company Name Corps of Engineers Company Name U.S. Army Corps of Engineers
Owner or Operator - Phone 316-983-3267 Contact Phone 316-983-3267
Mailing Address 700 Federal Bldg - CENWK-PM-MO Mailing Address 700 Federal Bldg - CENWK-PM-MO
City Kansas City State MO Zip Code 64106-2806 City Kansas City State MO Zip Code 64106-2806
Will permit records be located on site? ☒ Y, ☐ N If not, provide an address where records will be kept
Company Name Corps of Engineers
Street Address 750 W. Warehouse Rd, Bldg 234 Mailing Address _____
City FL Leavenworth State KS Zip Code 66027-3387 City _____ State _____ Zip Code _____

II. SITE INFORMATION

A. LOCATION

Project Name Demolition of USDB Castle On Site Contact Name Christopher Prinslow
Street Address Bldg 475 Company Name U.S. Army Corps of Engineers
City St Leavenworth State KS Zip Code 66027-5000 Contact Phone 913-684-5073
Mailing Address 750 W. Warehouse Rd
Physical Location _____ City FL Leavenworth State KS Zip Code 66027-3387
QTR _____ QTR _____ QTR _____ Section _____ Township _____ Range _____ South _____ E, F, G, W. County Leavenworth

For Office Use Only RECEIVED NOV 20 2003 BUREAU OF WATER		Paid <u>\$100</u> Date <u>11/20/03</u> Initials <u>AG</u> Check No <u>1012</u>	Authorized <u>AY</u> Reviewer Date <u>11/23/03</u>
 Secretary, Kansas Department of Health and Environment		Federal Permit No. <u>KS R101213</u>	

To receive a hard copy of the general permit information packet check yes ☐ Y, ☐ N

SECTION 01572

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT
02/03

PART 1 GENERAL

1.1 GOVERNMENT POLICY

Government policy is to apply sound environmental principles in the design, construction and use of facilities. As part of the implementation of that policy the Contractor shall: (1) practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction and demolition waste from landfills and incinerators and to facilitate their recycling or reuse.

1.2 MANAGEMENT

The Contractor shall take a pro-active, responsible role in the management of construction and demolition waste and require all subcontractors, vendors, and suppliers to participate in the effort. Construction and demolition waste includes products of demolition or removal, excess or unusable construction materials, packaging materials for construction products, and other materials generated during the construction process but not incorporated into the work. In the management of waste consideration shall be given to the availability of viable markets, the condition of the material, the ability to provide the material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates. The Contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling of waste. Revenues or other savings obtained for salvage, or recycling shall accrue to the Contractor. Firms and facilities used for recycling, reuse, and disposal shall be appropriately permitted for the intended use to the extent required by Federal, State, and local regulations.

1.3 PLAN

A waste management plan shall be submitted within 15 days after notice to proceed and prior to initiating any site preparation work. The plan shall include the following:

- a. Name of individuals on the Contractor's staff responsible for waste prevention and management.
- b. Actions that will be taken to reduce solid waste generation.
- c. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas and equipment to be used for processing, sorting, and temporary storage of wastes.
- d. Characterization, including estimated types and quantities, of the waste to be generated.
- e. Name of landfill and/or incinerator to be used and the estimated costs for use, assuming that there would be no salvage or recycling on the project.
- f. Identification of local and regional reuse programs, including non-profit organizations such as schools, local housing agencies, and organizations that accept used materials such as materials exchange networks and Habitat for Humanity.

g. List of specific waste materials that will be salvaged for resale, salvaged and reused, or recycled. Recycling facilities that will be used shall be identified.

h. Identification of materials that cannot be recycled/reused with an explanation or justification.

1.4 RECORDS

Records shall be maintained to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. The records shall be made available to the Contracting Officer during construction, and a copy of the records shall be delivered to the Contracting Officer upon completion of the construction.

1.5 COLLECTION

The necessary containers, bins and storage areas to facilitate effective waste management shall be provided and shall be clearly and appropriately identified. Recyclable materials shall be handled to prevent contamination of materials from incompatible products and materials and separated by one of the following methods:

1.5.1 Source Separated Method.

Waste products and materials that are recyclable shall be separated from trash and sorted into appropriately marked separate containers and then transported to the respective recycling facility for further processing.

1.5.2 Co-Mingled Method.

Waste products and recyclable materials shall be placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed.

1.5.3 Other Methods.

Other methods proposed by the Contractor may be used when approved by the Contracting Officer.

1.6 DISPOSAL

Except as otherwise specified in other sections of the specifications, disposal shall be in accordance with the following:

1.6.1 Reuse.

First consideration shall be given to salvage for reuse since little or no re-processing is necessary for this method, and less pollution is created when items are reused in their original form. Sale or donation of waste suitable for reuse shall be considered. Salvaged materials, other than those specified in other sections to be salvaged and reinstalled, shall not be used in this project.

1.6.2 Recycle.

Waste materials not suitable for reuse, but having value as being recyclable, shall be made available for recycling whenever economically feasible.

1.6.3 Waste.

Materials with no practical use or economic benefit shall be disposed at a landfill or incinerator.

-- End of Section --

SECTION 01780A
CLOSEOUT SUBMITTALS
05/02

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

As-Built Drawings; G, RE.

Drawings showing final as-built conditions of the project. The final CADD as-built drawings shall consist of one set of electronic CADD drawing files in the specified format, one set of mylar drawings, 2 sets of blue-line prints of the mylars, and one set of the approved working as-built drawings.

SD-03 Product Data

As-Built Record of Equipment and Materials; G, RE.

Two copies of the record listing the as-built materials and equipment incorporated into the construction of the project.

Warranty Management Plan; G, RE.

One set of the warranty management plan containing information relevant to the warranty of materials and equipment incorporated into the construction project, including the starting date of warranty of construction. The Contractor shall furnish with each warranty the name, address, and telephone number of each of the guarantor's representatives nearest to the project location.

Warranty Tags; G, RE.

Two record copies of the warranty tags showing the layout and design.

Final Cleaning; G, RE.

Two copies of the listing of completed final clean-up items.

1.2 PROJECT RECORD DOCUMENTS

1.2.1 As-Built Drawings

This paragraph covers as-built drawings complete, as a requirement of the contract. The terms "drawings," "contract drawings," "drawing files," "working as-built drawings" and "final as-built drawings" refer to contract drawings which are revised to be used for final as-built drawings.

1.2.1.1 Government Furnished Materials

One set of electronic CADD files in the specified software and format revised to reflect all bid amendments will be provided by the Government. These files are for no other purpose than the formulation of the as-built and record drawings. The as-bid documents will govern in all instances of difference between the CADD files furnished and the as-bid documents.

1.2.1.2 Working As-Built and Final As-Built Drawings

The Contractor shall revise 3 sets of paper drawings by red-line process to show the as-built conditions during the prosecution of the project. These working as-built marked drawings shall be kept current on a weekly basis and at least one set shall be available on the jobsite at all times. Changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes. Final as-built drawings shall be prepared after the completion of each definable feature of work as listed in the Contractor Quality Control Plan (Foundations, Utilities, Structural Steel, etc., as appropriate for the project). The working as-built marked prints and final as-built drawings will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay estimate. If the Contractor fails to maintain the working and final as-built drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining the as-built drawings. This monthly deduction will continue until an agreement can be reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of updated drawings. The working and final as-built drawings shall show, but shall not be limited to, the following information:

- a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, the as-built drawings shall show, by offset dimensions to two permanently fixed surface features, the end of each run including each change in direction. Valves, splice boxes and similar appurtenances shall be located by dimensioning along the utility run from a reference point. The average depth below the surface of each run shall also be recorded.
- b. The location and dimensions of any changes within the building structure.
- c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.
- d. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.
- e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.
- f. Changes or modifications which result from the final inspection.
- g. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the final as-built prints.
- h. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, the Contractor shall furnish a contour map of the final borrow pit/spoil area elevations.
- i. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.

j. Modifications (change order price shall include the Contractor's cost to change working and final as-built drawings to reflect modifications) and compliance with the following procedures.

- (1) Directions in the modification for posting descriptive changes shall be followed.
- (2) A Modification Circle shall be placed at the location of each deletion.
- (3) For new details or sections which are added to a drawing, a Modification Circle shall be placed by the detail or section title.
- (4) For minor changes, a Modification Circle shall be placed by the area changed on the drawing (each location).
- (5) For major changes to a drawing, a Modification Circle shall be placed by the title of the affected plan, section, or detail at each location.
- (6) For changes to schedules or drawings, a Modification Circle shall be placed either by the schedule heading or by the change in the schedule.
- (7) The Modification Circle size shall be 1/2 inch diameter unless the area where the circle is to be placed is crowded. Smaller size circle shall be used for crowded areas.

1.2.1.3 Drawing Preparation

The as-built drawings shall be modified as may be necessary to correctly show the features of the project as it has been constructed by bringing the contract set into agreement with approved working as-built prints, and adding such additional drawings as may be necessary. These working as-built marked prints shall be neat, legible and accurate. These drawings are part of the permanent records of this project and shall be returned to the Contracting Officer after approval by the Government. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at no expense to the Government.

1.2.1.4 Computer Aided Design and Drafting (CADD) Drawings

Only personnel proficient in the preparation of CADD drawings shall be employed to modify the contract drawings or prepare additional new drawings. Additions and corrections to the contract drawings shall be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols shall be the same as the original line colors, line weights, lettering, layering conventions, and symbols. If additional drawings are required, they shall be prepared using the specified electronic file format applying the same graphic standards specified for original drawings. The title block and drawing border to be used for any new final as-built drawings shall be identical to that used on the contract drawings. Additions and corrections to the contract drawings shall be accomplished using CADD files. The Contractor will be furnished "as-designed" drawings in compact disc, read-only memory (CD-ROM). The Contractor shall be responsible for providing all program files and hardware necessary to prepare final as-built drawings. The Contracting Officer will review final as-built drawings for accuracy and the Contractor shall make required corrections, changes, additions, and deletions.

a. CADD colors shall be the "base" colors of red, green, and blue. Color code for changes shall be as follows:

- (1) Deletions (red) - Deleted graphic items (lines) shall be colored red with red lettering in notes and leaders.

(2) Additions (Green) - Added items shall be drawn in green with green lettering in notes and leaders.

(3) Special (Blue) - Items requiring special information, coordination, or special detailing or detailing notes shall be in blue.

b. The Contract Drawing files shall be renamed in a manner related to the contract number (i.e., 98-C-10.DGN) as instructed in the Pre-Construction conference. Marked-up changes shall be made only to those renamed files. All changes shall be made on the layer/level as the original item. There shall be no deletions of existing lines; existing lines shall be over struck in red. Additions shall be in green with line weights the same as the drawing. Special notes shall be in blue on layer #63.

c. When final revisions have been completed, the cover sheet drawing shall show the wording "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in letters at least 3/16 inch high. All other contract drawings shall be marked either "AS-Built" drawing denoting no revisions on the sheet or "Revised As-Built" denoting one or more revisions. Original contract drawings shall be dated in the revision block.

d. Within 20 days after Government approval of all of the working as-built drawings for a phase of work, the Contractor shall prepare the final CADD as-built drawings for that phase of work and submit two sets of blue-lined prints of these drawings for Government review and approval. The Government will promptly return one set of prints annotated with any necessary corrections. Within 10 days the Contractor shall revise the CADD files accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within 20 days of substantial completion of all phases of work, the Contractor shall submit the final as-built drawing package for the entire project.

1.2.1.5 Payment

No separate payment will be made for as-built drawings required under this contract, and all costs accrued in connection with such drawings shall be considered a subsidiary obligation of the Contractor.

1.2.2 As-Built Record of Equipment and Materials

The Contractor shall furnish two copies of preliminary record of equipment and materials used on the project 15 days prior to final inspection. This preliminary submittal will be reviewed and returned promptly after final inspection with Government comments. Three sets of final record of equipment and materials shall be submitted 10 days after final inspection. The designations shall be keyed to the related area depicted on the contract drawings. The record shall list the following data:

RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA

Description	Specification Section	Manufacturer and Catalog, Model, and Serial Number	Composition and Size	Where Used
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1.2.3 Final Approved Shop Drawings

The Contractor shall furnish final approved project shop drawings 30 days after transfer of the completed facility.

1.2.4 Construction Contract Specifications

The Contractor shall furnish final as-built construction contract specifications, including modifications thereto, 30 days after transfer of the completed facility.

1.2.5 Real Property Equipment

The Contractor shall furnish a list of installed equipment furnished under this contract. The list shall include all information usually listed on manufacturer's name plate. The "EQUIPMENT-IN-PLACE LIST" shall include, as applicable, the following for each piece of equipment installed: description of item, location (by room number), model number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty. A draft list shall be furnished at time of transfer. The final list shall be furnished 30 days after transfer of the completed facility.

1.3 WARRANTY MANAGEMENT

1.3.1 Warranty Management Plan

The Contractor shall develop a warranty management plan which shall contain information relevant to the clause Warranty of Construction. At least 30 days before the planned pre-warranty conference, the Contractor shall submit the warranty management plan for Government approval. The warranty management plan shall include all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan shall be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below shall include due date and whether item has been submitted or was accomplished. Warranty information made available during the construction phase shall be submitted to the Contracting Officer for approval prior to each monthly pay estimate. Approved information shall be assembled in a binder and shall be turned over to the Government upon acceptance of the work. The construction warranty period shall begin on the date of project acceptance and shall continue for the full product warranty period. A joint 4 month and 9 month warranty inspection shall be conducted, measured from time of acceptance, by the Contractor, Contracting Officer and the Customer Representative. Information contained in the warranty management plan shall include, but shall not be limited to, the following:

a. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subcontractors, manufacturers or suppliers involved.

b. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.

c. A list for each warranted equipment, item, feature of construction or system indicating:

1. Name of item.
2. Model and serial numbers.
3. Location where installed.
4. Name and phone numbers of manufacturers or suppliers.
5. Names, addresses and telephone numbers of sources of spare parts.
6. Warranties and terms of warranty. This shall include one-year overall warranty of construction. Items which have extended warranties shall be indicated with separate warranty expiration dates.
7. Cross-reference to warranty certificates as applicable.
8. Starting point and duration of warranty period.

9. Summary of maintenance procedures required to continue the warranty in force.
10. Cross-reference to specific pertinent Operation and Maintenance manuals.
11. Organization, names and phone numbers of persons to call for warranty service.
12. Typical response time and repair time expected for various warranted equipment.

d. The Contractor's plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.

e. Procedure and status of tagging of all equipment covered by extended warranties.

f. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.3.2 Performance Bond

The Contractor's Performance Bond shall remain effective throughout the construction period.

a. In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others, and after completion of the work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.

b. In the event sufficient funds are not available to cover the construction warranty work performed by the Government at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.

c. Following oral or written notification of required construction warranty repair work, the Contractor shall respond in a timely manner. Written verification will follow oral instructions. Failure of the Contractor to respond will be cause for the Contracting Officer to proceed against the Contractor.

1.3.3 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, the Contractor shall meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. Communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty shall be established/reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, the Contractor shall furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contact will be located within the local service area of the warranted construction, shall be continuously available, and shall be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

1.3.4 Contractor's Response to Construction Warranty Service Requirements

Following oral or written notification by the Contracting Officer, the Contractor shall respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the three categories of

priorities listed below. The Contractor shall submit a report on any warranty item that has been repaired during the warranty period. The report shall include the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within the timeframes specified, the Government will perform the work and backcharge the construction warranty payment item established.

a. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.

b. Second Priority Code 2. Perform onsite inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.

c. Third Priority Code 3. All other work to be initiated within 3 work days and work continuously to completion or relief.

d. The "Construction Warranty Service Priority List" is as follows:

Code 1-Air Conditioning Systems

- (1) Recreational support.
- (2) Air conditioning leak in part of building, if causing damage.
- (3) Air conditioning system not cooling properly.

Code 1-Doors

- (1) Overhead doors not operational, causing a security, fire, or safety problem.
- (2) Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors

- (1) Overhead doors not operational.
- (2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical

- (1) Power failure (entire area or any building operational after 1600 hours).
- (2) Security lights
- (3) Smoke detectors

Code 2-Electrical

- (1) Power failure (no power to a room or part of building).
- (2) Receptacle and lights (in a room or part of building).

Code 3-Electrical

Street lights.

Code 1-Gas

- (1) Leaks and breaks.
- (2) No gas to family housing unit or cantonment area.

Code 1-Heat

- (1). Area power failure affecting heat.
- (2). Heater in unit not working.

Code 2-Kitchen Equipment

- (1) Dishwasher not operating properly.
- (2) All other equipment hampering preparation of a meal.

Code 1-Plumbing

- (1) Hot water heater failure.

- (2) Leaking water supply pipes.

Code 2-Plumbing

- (1) Flush valves not operating properly.
 (2) Fixture drain, supply line to commode, or any water pipe leaking.
 (3) Commode leaking at base.

Code 3 -Plumbing

Leaky faucets.

Code 3-Interior

- (1) Floors damaged.
 (2) Paint chipping or peeling.
 (3) Casework.

Code 1-Roof Leaks

Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks

Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

Code 2-Water (Exterior)

No water to facility.

Code 2-Water (Hot)

No hot water in portion of building listed.

Code 3-All other work not listed above.

1.3.5 Warranty Tags

At the time of installation, each warranted item shall be tagged with a durable, oil and water resistant tag approved by the Contracting Officer. Each tag shall be attached with a copper wire and shall be sprayed with a silicone waterproof coating. The date of acceptance and the QC signature shall remain blank until project is accepted for beneficial occupancy. The tag shall show the following information.

- a. Type of product/material_____.
- b. Model number_____.
- c. Serial number_____.
- d. Contract number_____.
- e. Warranty period_____from_____to_____.
- f. Inspector's signature_____.
- g. Construction Contractor_____.
- Address_____.
- Telephone number_____.
- h. Warranty contact_____.
- Address_____.
- Telephone number_____.

i. Warranty response time priority code_____.

j. WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.

1.4 MECHANICAL TESTING, ADJUSTING, BALANCING, AND COMMISSIONING

Prior to final inspection and transfer of the completed facility; all reports, statements, certificates, and completed checklists for testing, adjusting, balancing, and commissioning of mechanical systems shall be submitted to and approved by the Contracting Officer as specified in applicable technical specification sections.

1.5 OPERATION AND MAINTENANCE MANUALS

Operation manuals and maintenance manuals shall be submitted as specified. Operation manuals and maintenance manuals provided in a common volume shall be clearly differentiated and shall be separately indexed.

1.6 FINAL CLEANING

The premises shall be left broom clean. Stains, foreign substances, and temporary labels shall be removed from surfaces. Carpet and soft surfaces shall be vacuumed. Equipment and fixtures shall be cleaned to a sanitary condition. Filters of operating equipment shall be replaced. Debris shall be removed from roofs, drainage systems, gutters, and downspouts. Paved areas shall be swept and landscaped areas shall be raked clean. The site shall have waste, surplus materials, and rubbish removed. The project area shall have temporary structures, barricades, project signs, and construction facilities removed. A list of completed clean-up items shall be submitted on the day of final inspection.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

DIVISION 2 - SITE WORK

02090	Waste Removal and Disposal
02220	Demolition
02233	Clearing for Civil Works
02230A	Earthwork
02316A	Excavation, Trenching, and Backfilling for Utilities Systems
02370A	Soil Surface Erosion Control
02630A	Storm-Drainage System
02741A	Hot-Mix Asphalt (HMA) for Roads
02770A	Concrete Sidewalks and Curbs and Gutters
02921A	Seeding

SECTION 02090

WASTE REMOVAL AND DISPOSAL

PART 1 GENERAL

1.1 SCOPE

The work covered by this section includes furnishing all labor, equipment, materials, and transportation necessary for the proper and safe collection, handling, packaging and disposal of three types of waste (solid, non-hazardous and hazardous) generated by this project.

1.1.1 Paint

Any work for this project includes the use of paint materials. Specifically, this non-inclusive list includes the use of various products: paints (latex, alkyds, oil-based, enamels, aluminum, solvent-based, traffic, spray or aerosols), lacquers, polyurethane, urethanes, vanish, sealers, stains, strippers, caulks, adhesives, mineral spirits and paint thinners. Contractor shall notify in writing no later than 10 days following issuance of the Notice of Proceed of the types of products and a list of hazardous materials the Contractor intends to use on each building. The Contractor shall also provide a list of Material Safety Data Sheets (MSDS) for each hazardous material proposed for use in the work specified in this contract.

1.1.2 Coordination

The Contractor shall coordinate, through the Contracting Officer's Representative (COR), the collection, storage and disposal of the Contractor's waste with Directorate of Installation Support (DIS) Environmental Division.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated.

When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

List of Hazardous Materials; G, RE.

The Contractor shall submit to the COR, for review from the DIS Environmental Division, a certified list of hazardous materials or manufacturer's descriptive literature for all major hazardous materials proposed for use in the work specified herein.

List of Material Safety Data Sheets(MSDS).

The Contractor shall submit to the COR, to be given to the DIS Environmental Division, a Material Safety Data Sheet (MSDS) for each hazardous material proposed in the work specified herein.

SD-07 Certificates

Proof of Disposal; G, RE.

1.3 SOLID WASTE

1.3.1 Definition and Examples

The Contractor shall be responsible for the proper handling and disposal of all generated solid waste. Solid waste is defined as: any discarded material in any physical state. Examples of solid waste: dried latex paint, empty paint containers (with the drippings absorbed with dry sweep or wood shavings), empty caulk containers and spray paint aerosols shooting air. An empty container is a container which contains one inch or less of liquid within the container. Examples: one gallon paint bucket with paint drippings.

1.3.2 Differentiation Between Solid and Liquid

The Contractor shall place all solid waste in a solid waste dumpster or roll-off provided by the Contractor. NO liquid solid waste shall be placed in the solid waste dumpster or roll-off. Refer to 1.5 Non-Hazardous Waste for proper disposal procedure for all Non-Hazardous liquid solid waste.

1.4 NON-HAZARDOUS WASTE

The Contractor shall be responsible for the proper handling, packaging, shipment and disposal of all non-hazardous waste generated by this project. Non-hazardous waste is defined as: waste that is a solid waste but not a hazardous waste. Examples of non-hazardous waste are: pourable latex paint, pourable alkyd paint and latex or alkyd wash water. Any wash water waste generated by the Contractor when washing out latex or alkyd covered brushes shall be properly disposed of by pouring the wash water down the sanitary and NOT the storm sewer.

1.5 DUMPING

The Contractor shall not dump any type of liquids (Latex or oil-based paint and mineral spirits) on the ground or down the storm or sanitary sewer, except for wash water waste identified in paragraph 1.5. All containers which hold one inch or more of the original product within the container shall be left inside and stored in the building where the paint was used. No non-hazardous waste shall be turned in by the Contractor through the COR to the DIS Environmental Division.

1.6 HAZARDOUS WASTE

The Contractor shall be responsible for the proper collection, handling and packaging for disposal of all hazardous waste generated by this project. The Government shall furnish services for disposal of the Hazardous Waste. Hazardous Waste is defined as: a solid waste and which meets the definition of either characteristic or listed waste as defined in 40 CFR Part 261. Examples of hazardous waste are: lead paint chips, paint stripping waste, oil-based paints, oil-based enamels, oil-based primers, traffic paints, industrial and marine coatings, oil-based kilz, mineral spirits, paint thinners, gasoline, kerosene, oil-based stains, shellacs, strippers, polyurethane and aerosol paint. All containers which hold one inch or more of the original product within the container shall be left inside and stored in the building where the paint was used.

1.6.1 Disposition of Hazardous Waste

The Government has determined that certain types of paint waste debris are hazardous waste (See paragraph 1.4). The Contractor shall properly segregate, collect, label, package and store all generated hazardous waste. The job site shall be treated as a Satellite Accumulation Point.

1.6.2 Containment of Hazardous Waste

The Government shall provide the Contractor, prior to the start of the project, two containers for storage of their hazardous waste: one to store any solvent contaminated rags and the other container shall be used to store mineral spirits

or paint thinner. Waste materials shall be packaged for transportation, in accordance with Department of Transportation (DOT) Regulations found in 49 CFR Parts 171, 172 and 173. These containers shall be in good condition without dents or rust and have the package markings labeled on the side of the container.

1.6.3 Container Inspection

The Contractor shall inspect each container of Hazardous Waste daily and ensure that the lid on each container of Hazardous Waste is closed and secured except when the Contractor is placing Hazardous Waste into the container. The Contractor shall maintain a log of daily Hazardous Waste generation and inspections for each container during the project. The log shall include name of project, contractor name, container number, description of type of Hazardous Waste added to each container and date of inspection for each container. A copy of the completed log shall be provided to the COR once the project is complete as proof of disposal. The Contractor shall label each container with the following words "Hazardous Waste" on the side of each container using the red and white "Hazardous Waste" label the COR furnishes. The container storing contaminated rags shall also have the words "Dirty Rags" on the "Hazardous Waste" label.

1.6.4 Soiled Rags

After each use, the Contractor shall place and store all used solvent contaminated rags in the provided container and then close and secure the lid. Rags are defined as any type of material, ie: any type of fabric/material or paper product. Rags can be used once or many times prior to their disposal. Rags can be soiled by various contaminants, ie: grease, gasoline, mineral spirits, paint thinner, solvents, oil-based paint, traffic paint, shellac, lacquer, polyurethane and stains. Once the container is full or the project is complete, the Contractor shall coordinate a delivery through the COR to the DIS Environmental Division for proper disposal.

1.6.5 Paint Thinner/Mineral Spirits

The Contractor shall place all mineral spirits or paint thinner into the provided container at the end of each working day. Once the container is full or the project is complete, the Contractor shall coordinate a delivery through the COR to the DIS Environmental Division for proper disposal.

1.6.6 Dumping of Liquids

The Contractor shall not dump any type of liquids (except for wash water waste identified in paragraph 1.3.5.) on the ground or down the storm or sanitary sewer

1.6.7 Project Completion

When the project is complete, the Contractor shall return both containers through the COR to be given to the DIS Environmental Division.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION 02220

DEMOLITION
05/02

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A10.6 (1990) Safety Requirements for Demolition Operations

AIR CONDITIONING AND REFRIGERATION INSTITUTE (ARI)

ARI Guideline K (1997) Containers for Recovered Fluorocarbon Refrigerants

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 61-SUBPART M National Emission Standard for Asbestos

40 CFR 82 Protection of Stratospheric Ozone; Refrigerant Recycling

49 CFR 173.301 Shipment of Compressed Gas Cylinders

U.S. DEFENSE LOGISTICS AGENCY (DLA)

DLA 4145.25 (June 2000) Storage and Handling of Liquefied and Compressed Gases and Their Full and Empty Cylinders

U.S. DEPARTMENT OF DEFENSE (DOD)

DOD 4000.25-1-M Requisitioning and Issue Procedures

MIL-STD-129 (Rev. N) Marking for Shipment and Storage

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

1.2 GENERAL REQUIREMENTS

Do not begin demolition until authorization is received from the Contracting Officer. Remove rubbish and debris from the project site; do not allow accumulations. The work includes demolition and removal of resulting rubbish and debris. Rubbish and debris shall be removed from Government property daily, unless otherwise directed, to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in areas specified by the Contracting Officer. In the interest of occupational safety and health, the work shall be performed in accordance with EM 385-1-1, Section 23, Demolition, and other applicable Sections. In the interest of conservation, salvage shall be pursued to the maximum extent possible (in accordance with Section 01572 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT, if applicable); salvaged items and

materials shall be disposed of as specified.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated.

When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Work Plan; G, RE.

The procedures proposed for the accomplishment of the work.

SD-07 Certificates

Demolition plan; G, RE.

Notifications; G, RE.

Notification of Demolition and Renovation forms; G, RE.

Submit proposed salvage, demolition and removal procedures to the Contracting Officer for approval before work is started.

1.4 REGULATORY AND SAFETY REQUIREMENTS

Comply with federal, state, and local hauling and disposal regulations. In addition to the requirements of the "Contract Clauses," safety requirements shall conform with ANSI A10.6. Comply with all Federal, State, and local highway/roadway regulations as well as any posted limits.

1.4.1 Notifications

Furnish timely notification of demolition projects to the Kansas Department of Health and Environment.

Complete and submit Notification of Demolition and Renovation forms to State authorities and Contracting Officer, postmarked or delivered at least ten working days prior to commencement of work, in accordance with 40 CFR 61-SUBPART M.

1.5 DUST CONTROL

Prevent the spread of dust and debris and avoid the creation of a nuisance or hazard in the surrounding area. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution.

1.6 PROTECTION

1.6.1 Traffic Control Signs

Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights. Notify the Contracting Officer prior to beginning such work.

1.6.2 Existing Work

Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work, and shall submit a work plan outlining the procedures proposed. The Contractor shall

take necessary precautions to avoid damage to existing items to remain in place, to be reused, or to remain the property of the Government; any damaged items shall be repaired or replaced as approved by the Contracting Officer. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under this contract. Do not overload structural elements. Provide new supports and reinforcement for existing construction weakened by demolition or removal work. Repairs, reinforcement, or structural replacement must have Contracting Officer approval.

1.6.3 Trees

Trees within the project site which might be damaged during demolition, and which are indicated to be left in place, shall be protected by a 6 foot high fence. The fence shall be securely erected a minimum of 5 feet from the trunk of individual trees or follow the outer perimeter of branches or clumps of trees whichever is the greater distance. Any tree designated to remain that is damaged during the work under this contract shall be replaced in kind or as approved by the Contracting Officer.

1.6.4 Facilities

Protect electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities. Floors, roofs, walls, columns, pilasters, and other structural components that are designed and constructed to stand without lateral support or shoring, and are determined to be in stable condition, shall remain standing without additional bracing, shoring, or lateral support until demolished, unless directed otherwise by the Contracting Officer. The Contractor shall ensure that no elements determined to be unstable are left unsupported and shall be responsible for placing and securing bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, or demolition work performed under this contract.

1.6.5 Protection of Personnel

During the demolition work the Contractor shall continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workmen remove debris or perform other work in the immediate area.

1.7 BURNING

The use of burning at the project site for the disposal of refuse and debris is prohibited.

1.8 Required Data

Demolition plan shall include procedures for coordination with other work in progress, a disconnection schedule of utility services, a detailed description of methods and equipment to be used for each operation and of the sequence of operations.

1.9 Environmental Protection

The work shall comply with the requirements of Section 1356A.

1.10 USE OF EXPLOSIVES

Use of explosives will not be permitted.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 EXISTING FACILITIES TO BE REMOVED

3.1.1 Structures

Existing USDB Castle shall be removed to bottom of footings except as noted. Tunnels attached to the building shall be removed as shown in drawings.

3.1.1.1 Existing Footings and Walls (Wing 3)

Portions of existing footings and walls at the end of Wing 3 shall be left in place to avoid damaging the adjacent tunnel and to avoid undercutting the road in that area. Rubble infill may be used to stabilize the wall.

3.1.1.2 Existing Footings and Walls (Wing 7)

Portions of existing footings and walls at the end of Wing 7 shall be left in place as required to avoid damaging adjacent wall.

3.1.2 Utilities and Related Equipment

Remove existing utilities, as indicated and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the Contracting Officer. When utility lines are encountered that are not indicated on the drawings, the Contracting Officer shall be notified prior to further work in that area. Remove meters and related equipment and deliver to a location in accordance with instructions of the Contracting Officer. If utility lines are encountered that are not shown on drawings, contact the Contracting Officer for further instructions. Poles and wire outside the castle are to be removed. Care shall be taken in disconnecting wires from buildings, which is not to be demolished.

3.1.3 Air Conditioning Equipment

Remove air conditioning equipment without releasing chlorofluorocarbon refrigerants to the atmosphere in accordance with the Clean Air Act Amendment of 1990. Recover all refrigerants prior to removing air conditioning equipment and dispose of in accordance with the paragraph entitled "Disposal of Ozone Depleting Substance (ODS)."

3.1.4 Cylinders and Canisters

Remove all fire suppression system cylinders and canisters and dispose of in accordance with the paragraph entitled "Disposal of Ozone Depleting Substance (ODS)."

3.1.4.1 Fixtures

The Contractor shall remove fluorescent fixtures including ballasts and bulbs, and place them in a location defined by the DIS prior to building demolition.

3.1.4.2 Traps

The Contractor is to remove grease from all grease traps serving the building prior to demolition.

3.2 DISPOSITION OF MATERIAL

3.2.1 Title to Materials

Except where specified in other sections, all materials and equipment removed shall become the property of the Contractor and shall be removed from Government property. Title to materials resulting from demolition, and materials and equipment to be removed, is vested in the Contractor upon approval by the Contracting Officer of the Contractor's demolition and removal procedures, and authorization by the Contracting Officer to begin demolition. The Government will not be responsible for the condition or loss of, or damage to, such property after contract award. Materials and equipment shall not be viewed by prospective purchasers or sold on the site.

3.2.2 Salvaged Materials and Equipment

Material salvaged for the Contractor shall be stored as approved by the Contracting Officer and shall be removed from Government property before completion of the contract. Material salvaged for the Contractor shall not be sold on the site.

Historical items shall be removed in a manner to prevent damage. The following historical items shall be delivered to the Government for disposition: Corner stones, contents of corner stones, and document boxes wherever located on the site.

3.2.3 Disposal of Ozone Depleting Substance (ODS)

Class I and Class II ODS are defined in Section, 602(a) and (b), of The Clean Air Act. Prevent discharge of Class I and Class II ODS to the atmosphere. Place recovered ODS in cylinders meeting ARI Guideline K suitable for the type ODS (filled to no more than 80 percent capacity) and provide appropriate labeling. Recovered ODS shall be removed from Government property and disposed of in accordance with 40 CFR 82. Products, equipment and appliances containing ODS in a sealed, self-contained system (e.g. residential refrigerators and window air conditioners) shall be disposed of in accordance with 40 CFR 82.

3.2.3.1 Special Instructions

Each container shall have in it no more than one type of ODS. A warning/hazardous label shall be applied to the containers in accordance with Department of Transportation regulations. All cylinders including but not limited to fire extinguishers, spheres, or canisters containing an ODS shall have a tag with the following information:

- a. Activity name and unit identification code
- b. Activity point of contact and phone number
- c. Type of ODS and pounds of ODS contained
- d. Date of shipment

3.2.3.2 Fire Suppression Containers

Fire suppression system cylinders and canisters with electrical charges or initiators shall be deactivated prior to shipment. Also, safety caps shall be used to cover exposed actuation mechanisms and discharge ports on these special cylinders.

3.2.4 Transportation Guidance

Shipment of all ODS containers shall be in accordance with MIL-STD-129, DLA 4145.25 (also referenced one of the following: Army Regulation 700-68, Naval Supply Instruction 4440.128C, Marine Corps Order 10330.2C, and Air Force Regulation 67-12), 49 CFR 173.301, and DOD 4000.25-1-M.

3.3 CLEANUP

Debris and rubbish shall be removed from basement and similar excavations. Debris shall be removed and transported in a manner that prevents spillage on streets or adjacent areas. Local regulations regarding hauling and disposal shall apply.

3.3.1 Debris and Rubbish

Debris and rubbish shall be removed from basement and similar excavations. Debris shall be removed and transported in a manner that prevents spillage on streets or adjacent areas. Local regulations regarding hauling and disposal shall apply.

3.4 ACCESS

All access routes to and from the site shall be coordinated with the Contracting Officer. A temporary road shall be the responsibility of the demolition contractor.

-- End of Section --

SECTION 02233

CLEARING FOR CIVIL WORKS
07/02

PART 1 GENERAL

1.1 DEFINITIONS

1.1.1 Structures

The term "structures" shall include buildings or portions thereof, walls, etc. Structures shall be removed or filled to the ground surface.

1.2 PROJECT/SITE CONDITIONS

1.2.1 Aesthetics and Pollution Control

1.2.1.1 Ground Areas

All ground areas in the zone of normal pool level fluctuations which are disturbed by clearing operations and which would become subject to erosion will be protected or restored.

1.2.1.2 Construction Roads

All construction roads proposed for use by the Contractor for removing demolition debris or for access to the work area shall be approved, as to location and alignment, prior to construction. Where such roads are determined to be of no value to project operation or will not serve recreational access needs after project construction, the areas occupied by these roads will be restored by grading and seeding or sodding.

1.2.2 Existing Conditions

1.2.2.1 Boundaries

The area to be cleared under this section is indicated on the drawings.

1.2.2.2 Fences

Not at any time, should the fence or portion of the fence around the compound be removed.

1.2.2.3 Structures

Where filling of structures is required, fill to within 18 inches of the ground surface shall be made with noncombustible materials such as masonry rubble, and other debris. When all available debris has been used in filling, all remaining unfilled portions, together with the above 18 inches shall be completely filled to the ground surface with earth, borrowed as directed by the Contracting Officer. The top surfaces of fills shall be neat in appearance and smooth enough not to constitute a hazard to persons or livestock.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 CLEARING REQUIREMENTS

3.2 DISPOSAL OF MATERIAL

3.2.1 General

The material cleared from the areas shall be completely removed by transporting from the Government property areas unless otherwise approved by the Contracting Officer. All salvageable steel and copper will become the property of the Contractor and in the interest of conservation it is required that the Contractor make a reasonable effort to dispose of material for these purposes. However, there is no guarantee of salvageable materials for quantity or quality. All felled timber shall be completely removed. However, it is intended that all existing down timber in zones one (1) and two (2) will remain in place except solid, floatable material that is larger than 4 inches in diameter (regardless of length) and/or over 8 feet in length (regardless of diameter) shall be disposed of in the manner prescribed for cleared material. Clean-up of floatable debris shall be accomplished by any practical means. The cutting of branches and debris remaining after clean-up, to reduce their length in order to avoid removal, will not be permitted.

3.2.2 Removal from Site

Except as otherwise provided, the Contractor will be permitted to remove salvageable steel and copper from the site of the work. The Contractor will be allowed to stockpile salvaged material at approved locations. The Government will assume no responsibility for the protection and safekeeping of such material. All stockpiled salvageable material must be removed from Government lands before final acceptance of the work will be made.

3.3 MARKETABLE MATERIALS

Any of the cleared materials which the Contractor considers marketable shall become his property and shall be removed from the project site.

-- End of Section --

SECTION 02300A

EARTHWORK
12/97

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

- | | |
|--------------|--|
| AASHTO T 180 | (1997) Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and an 457 mm (18-in) Drop |
| AASHTO T 224 | (1996) Correction for Coarse Particles in the Soil Compaction Test |

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- | | |
|-------------|--|
| ASTM C 136 | (1996a) Sieve Analysis of Fine and Coarse Aggregates |
| ASTM D 422 | (1963; R 1998) Particle-Size Analysis of Soils |
| ASTM D 1140 | (1997) Amount of Material in Soils Finer than the No. 200 (75-micrometer) Sieve |
| ASTM D 1557 | (1991; R 1998) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu. m.)) |
| ASTM D 2487 | (1998) Classification of Soils for Engineering Purposes (Unified Soil Classification System) |
| ASTM D 4318 | (1998) Liquid Limit, Plastic Limit, and Plasticity Index of Soils |

1.2 DEFINITIONS

1.2.1 Satisfactory Materials

Satisfactory materials shall comprise any materials classified by ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, SW, SP. Satisfactory materials for grading shall be comprised of stones less than 8 inches, except for fill material for pavements and railroads which shall be comprised of stones less than 3 inches in any dimension.

1.2.2 Unsatisfactory Materials

Materials which do not comply with the requirements for satisfactory materials are unsatisfactory. Unsatisfactory materials also include man-made fills; trash; refuse; backfills from previous construction; and material classified as satisfactory which contains root and other organic matter or frozen material. The Contracting Officer shall be notified of any contaminated materials.

1.2.3 Cohesionless and Cohesive Materials

Cohesionless materials include materials classified in ASTM D 2487 as GW, GP, SW, and SP. Cohesive materials include materials classified as GC, SC, ML, CL, MH, and CH. Materials classified as GM and SM will be identified as cohesionless only when the fines are nonplastic. Testing required for classifying materials shall be in accordance with ASTM D 4318, ASTM C 136, ASTM D 422, and ASTM D 1140.

1.2.4 Degree of Compaction

Degree of compaction required, except as noted in the second sentence, is expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D 1557 abbreviated as a percent of laboratory maximum density. Since ASTM D 1557 applies only to soils that have 30 percent or less by weight of their particles retained on the 3/4 inch sieve, the degree of compaction for material having more than 30 percent by weight of their particles retained on the 3/4 inch sieve shall be expressed as a percentage of the maximum density in accordance with AASHTO T 180 Method D and corrected with AASHTO T 224. To maintain the same percentage of coarse material, the "remove and replace" procedure as described in the NOTE 8 in Paragraph 7.2 of AASHTO T 180 shall be used.

1.3 CLASSIFICATION OF EXCAVATION

No consideration will be given to the nature of the materials, and all excavation will be designated as unclassified excavation.

1.4 BLASTING

Blasting will not be permitted.

1.5 UTILIZATION OF EXCAVATED MATERIALS

Unsatisfactory materials removed from excavations shall be disposed of in designated waste disposal or spoil areas. Satisfactory material removed from excavations shall be used, insofar as practicable, in the construction of fills, subgrades, bedding (as backfill), and for similar purposes. No satisfactory excavated material shall be wasted without specific written authorization. Satisfactory material authorized to be wasted shall be disposed of in designated areas approved for surplus material storage or designated waste areas as directed. Newly designated waste areas on Government-controlled land shall be cleared and grubbed before disposal of waste material thereon. No excavated material shall be disposed of to endanger a partly finished structure, impair the efficiency or appearance of any structure, or be detrimental to the completed work in any way.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL EXCAVATION

The Contractor shall perform excavation of every type of material encountered within the limits of the project to the lines, grades, and elevations indicated and as specified. Grading shall be in conformity with the typical sections shown. Satisfactory excavated materials shall be transported to and placed in fill within the limits of the work. Unsatisfactory materials encountered within the limits of the work shall be excavated below grade and replaced with satisfactory materials as directed. Such excavated material and the satisfactory material ordered as replacement shall be included in excavation. Surplus satisfactory excavated material not required for fill or embankment shall be disposed of in areas approved for surplus material storage or designated waste

areas. Unsatisfactory excavated material shall be disposed of in designated waste or spoil areas. During construction, excavation and fill shall be performed in a manner and sequence that will provide proper drainage at all times. Material required for fill or embankment in excess of that produced by excavation within the grading limits shall be excavated from the borrow areas indicated or from other approved areas selected by the Contractor as specified.

3.2 SELECTION OF BORROW MATERIAL

Borrow material shall be selected to meet the requirements and conditions of the particular fill or embankment for which it is to be used. Borrow material shall be obtained from the borrow areas selected by the Contractor or from approved private sources. Unless otherwise provided in the contract, the Contractor shall obtain from the owners the right to procure material, pay royalties and other charges involved, and bear the expense of developing the sources, including rights-of-way for hauling. Borrow material from approved sources on Government-controlled land may be obtained without payment of royalties. Unless specifically provided, no borrow shall be obtained within the limits of the project site without prior written approval. Necessary clearing, grubbing, and satisfactory drainage of borrow pits and the disposal of debris thereon shall be considered related operations to the borrow excavation.

3.3 GRADING AREAS

Where indicated, work will be divided into grading areas within which satisfactory excavated material shall be placed in embankments, fills, and required backfills. The Contractor shall not haul satisfactory material excavated in one grading area to another grading area except when so directed in writing.

3.4 BACKFILL

Backfill adjacent to any and all types of structures shall be placed and compacted to at least 90 percent laboratory maximum density for cohesive materials or 95 percent laboratory maximum density for cohesionless materials to prevent wedging action or eccentric loading upon or against the structure. Compaction requirements for backfill materials shall conform to the applicable portions of paragraph SUBGRADE PREPARATION, and Section 02630 STORM-DRAINAGE SYSTEM; and Section 02316 EXCAVATION, TRENCHING, AND BACKFILLING FOR UTILITIES SYSTEMS. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment.

3.5 SUBGRADE PREPARATION

3.5.1 Construction

Subgrade shall be shaped to line, grade, and cross section, and compacted as specified. This operation shall include plowing, disking, and any moistening or aerating required to obtain specified compaction. Soft or otherwise unsatisfactory material shall be removed and replaced with satisfactory excavated material or other approved material as directed. Rock encountered in the cut section shall be excavated to a depth of 6 inches below finished grade for the subgrade. Low areas resulting from removal of unsatisfactory material or excavation of rock shall be brought up to required grade with satisfactory materials, and the entire subgrade shall be shaped to line, grade, and cross section and compacted as specified. The elevation of the finish subgrade shall not vary more than 0.05 foot from the established grade and cross section.

3.5.2 Compaction

Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment. Except for paved areas, each layer of the embankment shall be compacted to at least 85

percent of laboratory maximum density.

3.5.2.1 Subgrade for Pavements

Subgrade for pavements shall be compacted to at least 95 percentage laboratory maximum density for the depth below the surface of the pavement shown. When more than one soil classification is present in the subgrade, the top 6 inches of subgrade shall be scarified, windrowed, thoroughly blended, reshaped, and compacted.

3.6 FINISHING

The surface of excavations, embankments, and subgrades shall be finished to a smooth and compact surface in accordance with the lines, grades, and cross sections or elevations shown. The degree of finish for graded areas shall be within 0.1 foot of the grades and elevations indicated except that the degree of finish for subgrades shall be specified in paragraph SUBGRADE PREPARATION. Gutters and ditches shall be finished in a manner that will result in effective drainage. The surface of areas to be turfed shall be finished to a smoothness suitable for the application of turfing materials.

3.7 PLACING TOPSOIL

On areas to receive topsoil, the compacted subgrade soil shall be scarified to a 2 inch depth for bonding of topsoil with subsoil. Topsoil then shall be spread evenly and graded to the elevations and slopes shown. Topsoil shall not be spread when frozen or excessively wet or dry. Material required for topsoil in excess of that produced by excavation within the grading limits shall be obtained from areas indicated.

3.8 SUBGRADE PROTECTION

During construction, excavations shall be kept shaped and drained. Ditches and drains along subgrade shall be maintained to drain effectively at all times. The finished subgrade shall not be disturbed by traffic or other operation and shall be protected and maintained by the Contractor in a satisfactory condition until subbase, base, or pavement is placed. The storage or stockpiling of materials on the finished subgrade will not be permitted. No subbase, base course, or pavement shall be laid until the subgrade has been checked and approved, and in no case shall subbase, base, surfacing, or pavement be placed on a muddy, spongy, or frozen subgrade.

-- End of Section --

SECTION 02316A

EXCAVATION, TRENCHING, AND BACKFILLING FOR UTILITIES SYSTEMS
05/02

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 1556	(1990; R 1996) Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D 1557	(1991; R 1998) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu. m.))
ASTM D 2167	(1994) Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D 2487	(1998) Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D 2922	(1996el) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D 3017	(1988; R 1996el) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)

1.2 DEGREE OF COMPACTION

Degree of compaction shall be expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D 1557.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-06 Test Reports

Field Density Tests

Testing of Backfill Materials

Copies of all laboratory and field test reports within 24 hours of the completion of the test.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Satisfactory Materials

Satisfactory materials shall comprise any materials classified by ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, SW, SP.

2.1.2 Unsatisfactory Materials

Materials which do not comply with the requirements for satisfactory materials are unsatisfactory. Unsatisfactory materials also include man-made fills, trash, refuse, or backfills from previous construction. Unsatisfactory material also includes material classified as satisfactory which contains root and other organic matter, frozen material, and stones larger than 3 inches. The Contracting Officer shall be notified of any contaminated materials.

2.1.3 Cohesionless and Cohesive Materials

Cohesionless materials shall include materials classified in ASTM D 2487 as GW, GP, SW, and SP. Cohesive materials shall include materials classified as GC, SC, ML, CL, MH, and CH. Materials classified as GM and SM shall be identified as cohesionless only when the fines are nonplastic.

2.1.4 Rock

Rock shall consist of boulders measuring 1/2 cubic yard or more and materials that cannot be removed without systematic drilling and blasting such as rock material in ledges, bedded deposits, unstratified masses and conglomerate deposits, and below ground concrete or masonry structures, exceeding 1/2 cubic yard in volume, except that pavements shall not be considered as rock.

2.1.5 Unyielding Material

Unyielding material shall consist of rock and gravelly soils with stones greater than 8 inches in any dimension or as defined by the pipe manufacturer, whichever is smaller.

2.1.6 Unstable Material

Unstable material shall consist of materials too wet to properly support the utility pipe, conduit, or appurtenant structure.

2.1.7 Select Granular Material

Select granular material shall consist of well-graded sand, gravel, crushed gravel, crushed stone or crushed slag composed of hard, tough and durable particles, and shall contain not more than 10 percent by weight of material passing a No. 200 mesh sieve and no less than 95 percent by weight passing the 1 inch sieve. The maximum allowable aggregate size shall be 3 inches, or the maximum size recommended by the pipe manufacturer, whichever is smaller.

2.1.8 Initial Backfill Material

Initial backfill shall consist of select granular material or satisfactory materials free from rocks 1/2 inch or larger in any dimension or free from rocks of such size as recommended by the pipe manufacturer, whichever is smaller.

2.2 PLASTIC MARKING TAPE

Plastic marking tape shall be acid and alkali-resistant polyethylene film, 6 inches wide with minimum thickness of 0.004 inch. Tape shall have a minimum strength of 1750 psi lengthwise and 1500 psi crosswise. The tape shall be manufactured with integral wires, foil backing or other means to enable detection by a metal detector when the tape is buried up to 3 feet deep. The tape shall be of a type specifically manufactured for marking and locating underground

utilities. The metallic core of the tape shall be encased in a protective jacket or provided with other means to protect it from corrosion. Tape color shall be as specified in TABLE 1 and shall bear a continuous printed inscription describing the specific utility.

TABLE 1. Tape Color

Red:	Electric
Yellow:	Gas, Oil, Dangerous Materials
Orange:	Telephone, Telegraph, Television, Police, and Fire Communications
Blue:	Water Systems
Green:	Sewer Systems

2.3 Detection Wire For Non-Metallic Piping

Detection wire shall be insulated single strand, solid copper with a minimum diameter of 12 AWG.

PART 3 EXECUTION

3.1 EXCAVATION

Excavation shall be performed to the lines and grades indicated. Rock excavation shall include removal and disposition of material defined as rock in paragraph MATERIALS. Earth excavation shall include removal and disposal of material not classified as rock excavation. During excavation, material satisfactory for backfilling shall be stockpiled in an orderly manner at a distance from the banks of the trench equal to 1/2 the depth of the excavation, but in no instance closer than 2 feet. Excavated material not required or not satisfactory for backfill shall be removed from the site. Grading shall be done as may be necessary to prevent surface water from flowing into the excavation, and any water accumulating shall be removed to maintain the stability of the bottom and sides of the excavation. Unauthorized overexcavation shall be backfilled in accordance with paragraph BACKFILLING AND COMPACTION at no additional cost to the Government.

3.1.1 Trench Excavation Requirements

The trench shall be excavated as recommended by the manufacturer of the pipe to be installed. Trench walls below the top of the pipe shall be sloped, or made vertical, and of such width as recommended in the manufacturer's installation manual. Where no manufacturer's installation manual is available, trench walls shall be made vertical. Trench walls more than 5 feet high shall be shored, cut back to a stable slope, or provided with equivalent means of protection for employees who may be exposed to moving ground or cave in. Trench walls which are cut back shall be excavated to at least the angle of repose of the soil. Special attention shall be given to slopes which may be adversely affected by weather or moisture content. The trench width below the top of pipe shall not exceed 24 inches plus pipe outside diameter (O.D.) for pipes of less than 24 inches inside diameter and shall not exceed 36 inches plus pipe outside diameter for sizes larger than 24 inches inside diameter. Where recommended trench widths are exceeded, redesign, stronger pipe, or special installation procedures shall be utilized by the Contractor. The cost of redesign, stronger pipe, or special installation procedures shall be borne by the Contractor without any additional cost to the Government.

3.1.1.1 Bottom Preparation

The bottoms of trenches shall be accurately graded to provide uniform bearing and support for the bottom quadrant of each section of the pipe. Bell holes shall be excavated to the necessary size at each joint or coupling to eliminate point bearing. Stones of 1/2 inch or greater in any dimension, or as recommended by

the pipe manufacturer, whichever is smaller, shall be removed to avoid point bearing.

3.1.1.2 Removal of Unyielding Material

Where unyielding material is encountered in the bottom of the trench, such material shall be removed 6 inches below the required grade and replaced with suitable materials as provided in paragraph BACKFILLING AND COMPACTION.

3.1.1.3 Removal of Unstable Material

Where unstable material is encountered in the bottom of the trench, such material shall be removed to the depth directed and replaced to the proper grade with select granular material as provided in paragraph BACKFILLING AND COMPACTION. When removal of unstable material is required due to the Contractor's fault or neglect in performing the work, the resulting material shall be excavated and replaced by the Contractor without additional cost to the Government.

3.1.1.4 Excavation for Appurtenances

Excavation for manholes, catch-basins, inlets, or similar structures shall be of sufficient size to permit the placement and removal of forms for the full length and width of structure footings and foundations as shown. Rock shall be cleaned of loose debris and cut to a firm surface either level, stepped, or serrated, as shown or as directed. Loose disintegrated rock and thin strata shall be removed. Removal of unstable material shall be as specified above. When concrete or masonry is to be placed in an excavated area, special care shall be taken not to disturb the bottom of the excavation. Excavation to the final grade level shall not be made until just before the concrete or masonry is to be placed.

3.1.2 Stockpiles

Stockpiles of satisfactory materials shall be placed and graded as specified. Stockpiles shall be kept in a neat and well drained condition, giving due consideration to drainage at all times. The ground surface at stockpile locations shall be cleared, grubbed, and sealed by rubber-tired equipment, excavated satisfactory and unsatisfactory materials shall be separately stockpiled. Stockpiles of satisfactory materials shall be protected from contamination which may destroy the quality and fitness of the stockpiled material. If the Contractor fails to protect the stockpiles, and any material becomes unsatisfactory, such material shall be removed and replaced with satisfactory material from approved sources at no additional cost to the Government.

3.2 BACKFILLING AND COMPACTION

Backfill material shall consist of satisfactory material, select granular material, or initial backfill material as required. Backfill shall be placed in layers not exceeding 6 inches loose thickness for compaction by hand operated machine compactors, and 8 inches loose thickness for other than hand operated machines, unless otherwise specified. Each layer shall be compacted to at least 95 percent maximum density for cohesionless soils and 90 percent maximum density for cohesive soils, unless otherwise specified.

3.2.1 Trench Backfill

Trenches shall be backfilled to the grade shown. The trench shall not be backfilled until all specified tests are performed.

3.2.1.1 Replacement of Unyielding Material

Unyielding material removed from the bottom of the trench shall be replaced with select granular material or initial backfill material.

3.2.1.2 Replacement of Unstable Material

Unstable material removed from the bottom of the trench or excavation shall be replaced with select granular material placed in layers not exceeding 6 inches loose thickness.

3.2.1.3 Bedding and Initial Backfill

Bedding shall be of the type and thickness shown. Initial backfill material shall be placed and compacted with approved tampers to a height of at least one foot above the utility pipe or conduit. The backfill shall be brought up evenly on both sides of the pipe for the full length of the pipe. Care shall be taken to ensure thorough compaction of the fill under the haunches of the pipe.

3.2.1.4 Final Backfill

The remainder of the trench, except for special materials for roadways shall be filled with satisfactory material. Backfill material shall be placed and compacted as follows:

- a. Roadways: Backfill shall be placed up to the elevation at which the requirements in Section 02300 EARTHWORK control. Water flooding or jetting methods of compaction will not be permitted.
- b. Sidewalks, Turfed or Seeded Areas and Miscellaneous Areas: Backfill shall be deposited in layers of a maximum of 12 inch loose thickness, and compacted to 85 percent maximum density for cohesive soils and 90 percent maximum density for cohesionless soils. Compaction by water flooding or jetting will not be permitted. This requirement shall also apply to all other areas not specifically designated above.

3.2.2 Backfill for Appurtenances

After the manhole, catchbasin, inlet, or similar structure has been constructed and the concrete has been allowed to cure for 8 days, backfill shall be placed in such a manner that the structure will not be damaged by the shock of falling earth. The backfill material shall be deposited and compacted as specified for final backfill, and shall be brought up evenly on all sides of the structure to prevent eccentric loading and excessive stress.

3.3 SPECIAL REQUIREMENTS

Special requirements for both excavation and backfill relating to the specific utilities are as follows:

3.3.1 Gas Distribution

Trenches shall be excavated to a depth that will provide not less than 18 inches of cover in rock excavation and not less than 24 inches of cover in other excavation. Trenches shall be graded as specified for pipe-laying requirements in Section 02556 GAS DISTRIBUTION SYSTEM.

3.3.2 Water Lines

Trenches shall be of a depth to provide a minimum cover of 3 feet from the existing ground surface, or from the indicated finished grade, whichever is lower, to the top of the pipe.

3.3.3 Electrical Distribution System

Direct burial cable and conduit or duct line shall have a minimum cover of 24 inches from the finished grade, unless otherwise indicated. Special trenching

requirements for direct-burial electrical cables and conduits are specified in Section 16375 ELECTRICAL DISTRIBUTION SYSTEM, UNDERGROUND.

3.3.4 Plastic Marking Tape

Warning tapes shall be installed directly above the pipe, at a depth of 18 inches below finished grade unless otherwise shown.

3.4 TESTING

Testing shall be the responsibility of the Contractor and shall be performed at no additional cost to the Government.

3.4.1 Testing of Backfill Materials

Classification of backfill materials shall be determined in accordance with ASTM D 2487 and the moisture-density relations of soils shall be determined in accordance with ASTM D 1557. A minimum of one soil classification and one moisture-density relation test shall be performed on each different type of material used for bedding and backfill.

3.4.2 Field Density Tests

Tests shall be performed in sufficient numbers to ensure that the specified density is being obtained. A minimum of one field density test per lift of backfill for every 150 feet of installation shall be performed. One moisture density relationship shall be determined for every 1500 cubic yards of material used. Field in-place density shall be determined in accordance with ASTM D 1556, ASTM D 2167 and ASTM D 2922 as applicable. When ASTM D 2922 is used, the calibration curves shall be checked and adjusted using the sand cone method as described in paragraph Calibration of the ASTM publication. ASTM D 2922 results in a wet unit weight of soil and when using this method, ASTM D 3017 shall be used to determine the moisture content of the soil. The calibration curves furnished with the moisture gauges shall be checked along with density calibration checks as described in ASTM D 3017. The calibration checks of both the density and moisture gauges shall be made at the beginning of a job, on each different type of material encountered, at intervals as directed by the Contracting Officer. Copies of calibration curves, results of calibration tests, and field and laboratory density tests shall be furnished to the Contracting Officer. Trenches improperly compacted shall be reopened to the depth directed, then refilled and compacted to the density specified at no additional cost to the Government.

3.4.3 Displacement of Sewers

After other required tests have been performed and the trench backfill compacted to the finished grade surface, the pipe shall be inspected to determine whether significant displacement has occurred. This inspection shall be conducted in the presence of the Contracting Officer. Pipe sizes larger than 36 inches shall be entered and examined, while smaller diameter pipe shall be inspected by shining a light or laser between manholes or manhole locations, or by the use of television cameras passed through the pipe. If, in the judgment of the Contracting Officer, the interior of the pipe shows poor alignment or any other defects that would cause improper functioning of the system, the defects shall be remedied as directed at no additional cost to the Government.

-- End of Section --

SECTION 02370A

SOIL SURFACE EROSION CONTROL

01/03

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by basic designation only.

U.S. DEPARTMENT OF AGRICULTURE (USDA)

ASTM INTERNATIONAL (ASTM) (ASTM)

ASTM D 648	(2001) Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position
ASTM D 698	(2000a) Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu. ft.(600kN-m/cu. m.))
ASTM D 1248	(2000a) Polyethylene Plastics Extrusion Materials for Wire and Cable
ASTM D 1560	(1992; R 2000) Resistance to Deformation and Cohesion of Bituminous Mixtures by Means of Hveem Apparatus
ASTM D 1777	(1996) Thickness of Textile Materials
ASTM D 2844	(1994) Resistance R-Value and Expansion Pressure of Compacted Soils
ASTM D 3776	(1996) Mass per Unit Area (Weight)of Fabric
ASTM D 3787	(2001) Bursting Strength of Textiles - Constant-Rate-of-Traverse (CRT), Ball Burst Test
ASTM D 3884	(2001e1) Abrasion Resistance of Textile Fabrics (Rotary Platform, Double Head Method)
ASTM D 4355	(1999) Deterioration of Geotextiles From Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
ASTM D 4491	(1999a) Water Permeability of Geotextiles by Permittivity
ASTM D 4533	(1991; R 1996) Trapezoidal Tearing Strength of Geotextiles
ASTM D 4632	(1991; R 1996) Grab Breaking Load and Elongation of Geotextiles
ASTM D 4751	(1999a) Determining Apparent Opening Size of a Geotextile

ASTM D 4833	(2000) Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
ASTM D 4972	(2001) pH of Soils
ASTM D 5268	(1992; R 1997) Topsoil Used for Landscaping Purposes

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated.

When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Layout;
Erosion Control;

Scale drawings defining areas to receive recommended materials as required by federal, state or local regulations.

Maintenance Record;

Record of maintenance work performed, of measurements and findings for product failure, recommendations for repair, and products replaced.

SD-03 Product Data

Geosynthetic Binders;
Geotextile Fabrics;
Synthetic Grid Systems;

Manufacturer's literature including physical characteristics, application and installation instructions.

Equipment;

A listing of equipment to be used for the application of erosion control materials.

Finished Grade;
Erosion Control Blankets;

Condition of finish grade status prior to installation; location of underground utilities and facilities.

SD-04 Samples

Materials;

- a. Geosynthetic and synthetic binding material; 1 quart.
- b. Standard mulch; 2 pounds.
- d. Geotextile fabrics; 6 inch square.
- e. Erosion control blankets; 6 inch square.
- f. Synthetic grid systems; One sample grid.

SD-06 Test Reports

Geosynthetic Binders;
 Geotextile Fabrics;
 Erosion Control Blankets;
 Synthetic Grid Systems;

Certified reports of inspections and laboratory tests, prepared by an independent testing agency, including analysis and interpretation of test results. Each report shall be properly identified. Test methods used and compliance with recognized test standards shall be described.

SD-07 Certificates

Fill Material;
 Mulch;
 Geotextile Fabrics;

Prior to delivery of materials, certificates of compliance attesting that materials meet the specified requirements. Certified copies of the material certificates shall include the following.

For items listed in this section:

- a. Certification of recycled content or,
- b. Statement of recycled content.
- c. Certification of origin including the name, address and telephone number of manufacturer.

Geosynthetic Binders;
 Synthetic Soil Binders;

Certification for binders showing EPA registered uses, toxicity levels, and application hazards.

Erosion Control Plan;
 Construction Work Sequence Schedule;

Erosion control plan. Construction sequence schedule.

Installer's Qualification;

The installer's company name and address; training and experience and or certification.

Recycled Plastic;

Individual component and assembled unit structural integrity test; creep tolerance; deflection tolerance; and vertical load test results. The estimated percentage of recovered material content in the material and components. Life-cycle durability.

Composition.

Wood By-Products;

Composition, source, and particle size. Products shall be free from toxic chemicals or hazardous material.

Wood Cellulose Fiber;

Certification stating that wood components were obtained from managed forests.

SD-10 Operation and Maintenance Data

Maintenance Instructions;

Instruction for year-round care of installed material. The Contractor shall include manufacturer supplied spare parts.

1.3 DESCRIPTION OF WORK

The work shall consist of furnishing and installing soil surface erosion control materials, including fine grading, blanketing, stapling, mulching and miscellaneous related work, within project limits and in areas outside the project limits where the soil surface is disturbed from work under this contract at the designated locations. This work shall include all necessary materials, labor, supervision and equipment for installation of a complete system. This section shall be coordinated with the requirements of Section 02300A EARTHWORK and Section 02922A SODDING.

1.4 DELIVERY, INSPECTION, STORAGE, AND HANDLING

Materials shall be stored in designated areas and as recommended by the manufacturer protected from the elements, direct exposure, and damage. Containers shall not be dropped from trucks. Material shall be free of defects that would void required performance or warranty. Geosynthetic binders and synthetic soil binders shall be delivered in the manufacturer's original sealed containers and stored in a secure area.

- a. Erosion control blankets and geotextile fabric shall be furnished in rolls with suitable wrapping to protect against moisture and extended ultraviolet exposure prior to placement. Erosion control blanket and geotextile fabric rolls shall be labeled to provide identification sufficient for inventory and quality control purposes.
- b. All synthetic grids and synthetic sheets shall be sound and free of defects that would interfere with the proper placing of the block or impair the strength or permanence of the construction. Minor cracks in synthetic grids, incidental to the usual methods of manufacture, or resulting from standard methods of handling in shipment and delivery, shall not be deemed grounds for rejection.

1.5 SUBSTITUTIONS

Substitutions will not be allowed without written request and approval from the Contracting Officer.

1.6 INSTALLER'S QUALIFICATION

The installer shall be certified by the manufacturer for training and experience installing the material.

1.7 TIME LIMITATIONS

Backfilling the openings in synthetic grid systems and articulating cellular concrete block systems shall be completed a maximum 7 days after placement to protect the material from ultraviolet radiation.

1.8 WARRANTY

Erosion control material shall have a warranty for use and durable condition for

project specific installations. Temporary erosion control materials shall carry a minimum eighteen month warranty. Permanent erosion control materials shall carry a minimum three year warranty.

PART 2 PRODUCTS

2.1 RECYCLED PLASTIC

Recycled plastic shall contain a minimum 85 percent of recycled post-consumer product. Recycled material shall be constructed or manufactured with a maximum 1/4 inch deflection or creep in any member, according to ASTM D 648 and ASTM D 1248. The components shall be molded of ultraviolet (UV) and color stabilized polyethylene. The material shall consist of a minimum 75 percent plastic profile of high-density polyethylene, low-density polyethylene, and polypropylene raw material. The material shall be non-toxic and have no discernible contaminants such as paper, foil, or wood. The material shall contain a maximum 3 percent air voids and shall be free of splinters, chips, peels, buckling, and cracks. Material shall be resistant to deformation from solar heat gain.

2.2 BINDERS

2.2.1 Synthetic Soil Binders

Calcium chloride, or other standard manufacturer's spray on adhesives designed for dust suppression.

2.2.2 Geosynthetic Binders

Geosynthetic binders shall be manufactured in accordance with ASTM D 1560, ASTM D 2844; and shall be referred to as products manufactured for use as modified emulsions for the purpose of erosion control and soil stabilization. Emulsions shall be manufactured from all natural materials and provide a hard durable finish.

2.3 MULCH

Mulch shall be free from weeds, mold, and other deleterious materials. Mulch materials shall be native to the region.

2.3.1 Straw

Straw shall be stalks from oats, wheat, rye, barley, or rice, furnished in air-dry condition and with a consistency for placing with commercial mulch-blowing equipment.

2.3.2 Hay

Hay shall be native hay, sudan-grass hay, broomsedge hay, or other herbaceous mowings, furnished in an air-dry condition suitable for placing with commercial mulch-blowing equipment.

2.3.3 Wood Cellulose Fiber

Wood cellulose fiber shall not contain any growth or germination-inhibiting factors and shall be dyed an appropriate color to facilitate placement during application. Composition on air-dry weight basis: a minimum 9 to a maximum 15 percent moisture, and between a minimum 4.5 to a maximum 6.0 pH.

2.3.4 Paper Fiber

Paper fiber mulch shall be recycled news print that is shredded for the purpose of mulching seed.

2.3.5 Shredded Bark

Locally shredded material shall be treated to retard the growth of mold and fungi.

2.3.6 Wood By-Products

Wood locally chipped or ground bark shall be treated to retard the growth of mold and fungi. Gradation: A maximum 2 inch wide by 4 inch long.

2.3.7 Coir

Coir shall be manufactured from 100 percent coconut fiber cured in fresh water for a minimum of 6 months.

2.3.8 Mulch Control Netting

Mulch control netting may be constructed of lightweight recycled plastic, cotton, or paper or organic fiber. The recycled plastic shall be a woven or nonwoven polypropylene, nylon, or polyester containing stabilizers and/or inhibitors to make the fabric resistant to deterioration from UV, and with the following properties:

- a. Minimum grab tensile strength (TF 25 #1/ASTM D 4632), 180 pounds.
- b. Minimum Puncture (TF 25 #4/ASTM D 3787), 75 psi in the weakest direction.
- c. Apparent opening sieve size of a minimum 40 and maximum 80 (U.S. Sieve Size)..
- d. Minimum Trapezoidal tear strength (TF 25 #2/ASTM D 4533), 50 pounds.

2.4 GEOTEXTILE FABRICS

Geotextile fabrics shall be woven of polypropylene filaments formed into a stable network so that the filaments retain their relative position to each other. Sewn seams shall have strength equal to or greater than the geotextile itself. Fabric shall be installed to withstand maximum velocity flows as recommended by the manufacturer. The geotextile shall conform to the following minimum average roll values:

Property	Performance	Test Method
Weight		ASTM D 3776
Thickness		ASTM D 1777
Permeability		ASTM D 4491
Abrasion Resistance,	58 percent X	
Type (percent strength retained)	81 percent	ASTM D 3884
Tensile Grab Strength	1,467 N X 1, 933 N	ASTM D 4632
Grab Elongation	15percent X 20percent	ASTM D 4632
Burst Strength	5,510 kN/m ²	ASTM D 3787
Puncture Strength	733 N	ASTM D 4833
Trapezoid Tear	533 N X 533 N	ASTM D 4533
Apparent Opening Size	40 US Std Sieve	ASTM D 4751
UV Resistance @ 500 hrs	90 percent	ASTM D 4355

2.5 EROSION CONTROL BLANKETS

2.5.1 Erosion Control Blankets Type I

Type I blankets shall be used for erosion control and vegetation establishment on

roadside embankments, abutments, berms, shoulders, and median swales where natural vegetation will provide long term stabilization. Erosion control blankets shall be a machine-produced mat of 100% straw. The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a photodegradable polypropylene netting having an approximate 1/2 by 1/2 inch mesh and be sewn together on a maximum 1.5 inch centers with degradable thread. The erosion control blanket shall have the following properties:

Material Content

Straw	100 percent with approximately .50 lb/yd ² weight
Netting	One side only, lightweight photodegradable with approximately 1.64 lb/1,000 ft ² weight.
Thread	Degradable

Note 1: Photodegradable life a minimum of 2 months with a minimum 90 percent light penetration. Apply to slopes up to a maximum 3:1 gradient.

2.5.2 Erosion Control Blankets Type II

Erosion control blankets shall be a machine-produced mat of 100 percent straw. The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a polypropylene netting having an approximate 1/2 by 1/2 inch mesh with photodegradable accelerators to provide breakdown of the netting within approximately 45 days, depending upon geographic location and elevation. The blanket shall be sewn together on a maximum 1.5 inch centers with degradable thread. The erosion control blanket shall have the following properties:

Material Content

Straw	100 percent with approximately .50 lb/yd ² weight.
Netting	One side only, photodegradable with photo accelerators and approximately 1.64 lb/1,000 ft ² weight.
Thread	Degradable

NOTE: Photodegradable life a minimum of 10 months with a minimum 90 percent light penetration. Apply to slopes up to a maximum 3:1 gradient.

2.5.3 Erosion Control Blankets Type III

Type III blankets shall be used for erosion control and vegetation establishment on roadside embankments, abutments, berms, shoulders, and median swales where natural vegetation will provide long term stabilization. Erosion control blanket shall be a machine-produced mat consisting of 70 percent straw and 30 percent coconut fiber. The blanket shall be of consistent thickness with the straw and coconut fiber evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with heavyweight photodegradable polypropylene netting having UV additives to delay breakdown and an approximate 5/8 by 5/8 inch mesh, and on the bottom side with a lightweight photodegradable polypropylene netting with an approximate 1/2 inch by 1/2 inch mesh. The blanket shall be sewn

together on 1.5 inch centers with degradable thread. The erosion control blanket shall have the following properties:

Material Content

Straw	70 percent by approximately .35 lb/yd ² .
Coconut Fiber	30 percent by approximately .15 lb/yd ² weight.
Netting	Top side heavyweight photodegradable with UV additives and approximately 3 lb/1,000 ft ² weight Bottom side lightweight photodegradable with approximately 1.64 lb/1,000 ft ² weight.

NOTE: Photodegradable life a minimum of 10 months with a minimum 90 percent light penetration. Apply to slopes with a gradient less than 1.5:1.

2.5.4 Erosion Control Blankets Type IV

Erosion control blanket shall be a machine-produced mat of 100 percent straw. The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with lightweight photodegradable polypropylene netting having an approximate 1/2 by 1/2 inch mesh. The blanket shall be sewn together on 1.5 inch centers with degradable thread. The erosion control blanket shall have the following properties:

Material Content

Straw	100 percent with approximately .5 lb/yd ² weight.
Netting	Both sides lightweight photodegradable with approximately 1.64 lb/1,000 ft ² weight.
Thread	Degradable

NOTE: Photodegradable life a minimum of 2 months with a minimum 90 percent light penetration. Apply to slopes with a gradient of less than 1.5:1.

2.5.5 Erosion Control Blankets Type V

Erosion control blanket shall be a machine-produced mat of 100 percent straw. The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with polypropylene netting having an approximate 1/2 by 1/2 inch mesh with photodegradable accelerators to provide breakdown of the netting within approximately 45 days, depending upon geographic location and elevation. The bottom shall be covered with a polypropylene netting having an approximate 1/2 by 1/2 inch mesh with photo accelerators. The blanket shall be sewn together on 1.5 inch centers with degradable thread. The erosion control blanket shall have the following properties:

Material Content

Straw	100 percent with approximately .5 lb/yd ² weight.
Netting	Top side lightweight photodegradable with photo accelerators with approximately 1.64 lb/1,000 ft ² weight.
Thread	Bottom side lightweight photodegradable with photo accelerators and approximately 1.64 lb/1,000 ft ² weight.

NOTE: Photodegradable life a minimum of 10 months with a minimum 90 percent light penetration. Apply to slopes up to a maximum 2:1 gradient.

2.5.6 Erosion Control Blankets Type VI

Erosion control blanket shall be a machine-produced 100% biodegradable mat with a 100 percent straw fiber matrix. The blanket shall be of consistent thickness with the straw fiber evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a 100 percent biodegradable woven natural organic fiber netting. The netting shall consist of machine directional strands formed from two intertwined yarns with cross directional strands interwoven through the twisted machine strands (commonly referred to as a Leno weave) to form an approximate 1/2 by 1/2 inch mesh. The blanket shall be sewn together with biodegradable thread on 1.5 inch centers. The erosion control blanket shall have the following properties:

Material Content

Matrix	100 percent straw fiber with approximately .50 lb/yd ² weight
Netting	One side only, Leno woven 100% biodegradable natural organic fiber
Weight	approximately 9.3 lb/1,000 ft ² .
Thread	Biodegradable

NOTE: Photodegradable life a minimum of 10 months with a minimum 90 Percent light penetration. Apply to slopes up to a maximum 2:1 gradient.

2.5.7 Staking

Stakes shall be 100 percent biodegradable manufactured from recycled plastic or wood and shall be designed to safely and effectively secure erosion control blankets for temporary or permanent applications. The biodegradable stake shall be fully degradable by biological activity within a reasonable time frame. The bio-plastic resin used in production of the biodegradable stake shall consist of polylactide, a natural, completely biodegradable substance derived from renewable agricultural resources. The biodegradable stake must exhibit ample rigidity to enable being driven into hard ground, with sufficient flexibility to resist shattering. The biodegradable stake shall have serrations on the leg to increase resistance to pull-out from the soil.

2.5.8 Staples

Staples shall be as recommended by the manufacturer.

2.6 SYNTHETIC GRID AND SHEET SYSTEMS

Synthetic grid and sheet systems shall be formed of recycled plastic in accordance with paragraph RECYCLED PLASTICS and have interlocking components to form a uniform underlayment or strata to receive fill.

2.6.1 Synthetic Grid Systems

Grids shall be made of modular interlocking components. Blocks shall be formed as rigid interlocking components or as expandable sheets and shall be manufactured to allow articulation upward and downward while restricting lateral movement. The assembled grid system shall articulate over three-directional vertical curves, both upward and downward. The system shall provide 100 percent coverage of the area with the cells back filled.

2.6.2 Synthetic Sheet System

Synthetic sheet thickness shall be as indicated.

2.7 WATER

Unless otherwise directed, water shall be the responsibility of the Contractor. Water shall be potable or supplied by an existing irrigation system.

PART 3 EXECUTION

3.1 CONDITIONS

The Contractor shall submit a construction work sequence schedule, with the approved erosion control plan a minimum of 30 days prior to start of construction. The work schedule shall coordinate the timing of land disturbing activities with the provision of erosion control measures. Erosion control operations shall be performed under favorable weather conditions; when excessive moisture, frozen ground or other unsatisfactory conditions prevail, the work shall be stopped as directed. When special conditions warrant a variance to earthwork operations, a revised construction schedule shall be submitted for approval. Erosion control materials shall not be applied in adverse weather conditions which could affect their performance.

3.1.1 Finished Grade

The Contractor shall verify that finished grades are as indicated on the drawings; finish grading and compaction shall be completed in accordance with Section 02300A EARTHWORK, prior to the commencement of the work. The location of underground utilities and facilities in the area of the work shall be verified and marked. Damage to underground utilities and facilities shall be repaired at the Contractor's expense.

3.1.2 Placement of Erosion Control Blankets

Before placing the erosion control blankets, ensure the subgrade has been graded smooth; has no depressed, void areas; is free from obstructions, such as tree roots, projecting stones or other foreign matter. Vehicles shall not be permitted directly on the blankets.

3.1.3 Synthetic Grid

Before placing the grid system, ensure that the subgrade has been properly grubbed of large roots and rocks; compacted; has been graded smooth; has no depressed, void, soft or uncompacted areas; is free from obstructions, such as tree roots, projecting stones or other foreign matter; and has been seeded.

3.1.4 Concrete Cellular Block

Before placing geotextile fabric under cellular block, ensure that the subgrade has been properly compacted; has been graded smooth; has no depressed, void, soft or uncompacted areas; is free from obstructions, such as tree roots, projecting stones or other foreign matter; and has been seeded. Subgrade compaction shall be at least 90 percent of the maximum dry density at optimum moisture content, as determined by ASTM D 698, and shall be installed to within plus or minus 1 inch of the design elevation.

3.2 SITE PREPARATION

3.2.1 Soil Test

Soil shall be tested in accordance with ASTM D 5268 and ASTM D 4972 for determining the particle size and mechanical analysis. Sample collection onsite shall be random over the entire site. The test shall determine the soil particle size as compatible for the specified material.

3.2.2 Layout

Erosion control material locations may be adjusted to meet field conditions. When soil tests result in unacceptable particle sizes, a shop drawing shall be submitted indicating the corrective measures.

3.2.3 Protecting Existing Vegetation

When there are established lawns in the work area, the turf shall be covered and/or protected or replaced after construction operations. Existing trees, shrubs, and plant beds that are to be preserved shall be barricaded along the dripline. Damage to existing trees shall be mitigated by the Contractor at no additional cost to the Government. Damage shall be assessed by a state certified arborist or other approved professional using the National Arborist Association's tree valuation guideline.

3.2.4 Obstructions Below Ground

When obstructions below ground affect the work, shop drawings showing proposed adjustments to placement of erosion control material shall be submitted for approval.

3.3 INSTALLATION

3.3.1 Synthetic Binders

Synthetic binders shall be applied heaviest at edges of areas and at crests of ridges and banks to prevent displacement. Binders shall be applied to the remainder of the area evenly at the rate as recommended by the manufacturer.

3.3.2 Mulch Control Netting

Netting may be stapled over mulch according to manufacturer's recommendations.

3.3.3 Mechanical Anchor

Mechanical anchor shall be a V-type-wheel land packer; a scalloped-disk land packer designed to force mulch into the soil surface; or other suitable equipment.

3.3.4 Erosion Control Blankets

- a. Erosion control blankets shall be installed as indicated and in accordance with manufacturer's recommendations. The extent of erosion

control blankets shall be as shown on drawings.

b. Erosion control blankets shall be oriented in vertical strips and anchored with staples, as indicated. Adjacent strips shall be abutted to allow for installation of a common row of staples. Horizontal joints between erosion control blankets shall be overlapped sufficiently to accommodate a common row of staples with the uphill end on top.

c. Where exposed to overland sheet flow, a trench shall be located at the uphill termination. The erosion control blanket shall be stapled to the bottom of the trench. Backfill and compact the trench as required.

d. Where terminating in a channel containing an installed blanket, the erosion control blanket shall overlap installed blanket sufficiently to accommodate a common row of staples.

3.3.5 Synthetic Sheet System

Synthetic sheet systems shall be anchored in accordance with the manufacturer's recommendation. Systems shall be placed on a well graded surface and then backfilled, a maximum seven days after placement, to protect the material from ultraviolet radiation. As the installation progresses, backfilling shall include contiguous perimeter termination trenches.

3.3.5.1 Sheet System Revegetation

For areas not requiring re-vegetation, openings shall be backfilled to grade with well graded fill material and surface prepared for finish as indicated on the drawings. For areas requiring re-vegetation, openings shall be backfilled using well graded fill and topsoil as indicated on the drawings.

3.3.5.2 Sheet System Grids

Each pair of grids shall cover grade without gaps or open spaces between them. The system shall provide 100 percent coverage of the area with the cells backfilled.

3.3.5.3 Sheet System Seeding

Seed shall be installed in accordance with Section 02921A SEEDING.

3.3.5.4 Grid System Grids

Synthetic grid systems shall be anchored in accordance with the manufacturer's recommendation. Interlocking grid systems shall be placed on well graded surface and the backfilling of openings shall be completed a maximum 7 days after placement, to protect the material from ultraviolet radiation. As the installation progresses, backfilling shall include contiguous perimeter termination trenches.

3.3.6 Grids

3.3.6.1 Grid System Revegetation

For areas not requiring re-vegetation, openings shall be backfilled with a minimum 1/2 inch nominal size crushed rock, to a minimum 2 inch depth.

3.3.6.2 Synthetic Grids

Each pair of grids shall cover grade without gaps or open spaces between them. The system shall provide 100 percent coverage of the area with the cells backfilled.

3.3.13.3 Grid System Seeding

Seed shall be installed in accordance with Section 02921A SEEDING.

3.4 CLEAN-UP

Excess material, debris, and waste materials shall be disposed offsite at an approved landfill or recycling center. Adjacent paved areas shall be cleared. Immediately upon completion of the installation in an area, the area shall be protected against traffic or other use by erecting barricades and providing signage as required, or as directed.

3.5 WATERING SEED

Watering shall be started immediately after installing erosion control blanket type XI (revegetation mat). Water shall be applied to supplement rainfall at a sufficient rate to ensure moist soil conditions to a minimum 1 inch depth. Run-off and puddling shall be prevented. Watering trucks shall not be driven over turf areas, unless otherwise directed. Watering of other adjacent areas or plant material shall be prevented.

3.6 MAINTENANCE RECORD

A record shall be furnished describing the maintenance work performed, record of measurements and findings for product failure, recommendations for repair, and products replaced.

3.6.1 Maintenance

Maintenance shall include eradicating weeds; protecting embankments and ditches from surface erosion; maintaining the performance of the erosion control materials and mulch; protecting installed areas from traffic.

3.6.1.1 Maintenance Instructions

Written instructions containing drawings and other necessary information shall be furnished, describing the care of the installed material; including, when and where maintenance should occur, and the procedures for material replacement.

3.6.1.2 Patching and Replacement

Unless otherwise directed, material shall be placed, seamed or patched as recommended by the manufacturer. Material not meeting the required performance as a result of placement, seaming or patching shall be removed from the site. The Contractor shall replace the unacceptable material at no additional cost to the Government.

3.7 SATISFACTORY STAND OF GRASS PLANTS

When erosion control blanket type XI (revegetation mat) is installed, the grass plants shall be evaluated for species and health when the grass plants are a minimum 1 inch high. A satisfactory stand of grass plants from the revegetation mat area shall be a minimum 10 grass plants per square foot. The total bare spots shall not exceed 2 percent of the total revegetation mat area.

-- End of Section --

SECTION 02630A

STORM-DRAINAGE SYSTEM
03/00

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO HB-16	(1996) Standard Specifications for Highway Bridges
AASHTO M 198	(1998) Joints for Circular Concrete Sewer and Culvert Pipe Using Flexible Watertight Gaskets
AASHTO M 294	(1998) Corrugated Polyethylene Pipe, 300- to 1200- mm Diameter
AASHTO MP 7	(1997) Corrugated Polyethylene Pipe, 1350 and 1500 mm Diameter

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 48	(1994ae1) Gray Iron Castings
ASTM A 123/A 123M	(2001) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 536	(1999e1) Ductile Iron Castings
ASTM B 26/B 26M	(1998) Aluminum-Alloy Sand Castings
ASTM C 231	(1997e1) Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C 425	(1998b) Compression Joints for Vitrified Clay Pipe and Fittings
ASTM C 443	(1998) Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets
ASTM C 478	(1997) Precast Reinforced Concrete Manhole Sections
ASTM C 789	(1998) Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers
ASTM C 828	(1998) Low-Pressure Air Test of Vitrified Clay Pipe Lines
ASTM C 850	(1998) Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers with Less Than 2 Ft. of Cover Subjected to Highway Loadings

ASTM C 923	(1998) Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Materials
ASTM C 924	(1998) Concrete Pipe Sewer Lines by Low-Pressure Air Test Method
ASTM C 1103	(1994) Joint Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines
ASTM D 1557	(1991; R 1998) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu. m.))
ASTM D 1751	(1999) Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D 1752	(1984; R 1996e1) Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D 2167	(1994) Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D 2321	(1989; R 1995) Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM D 2922	(1996e1) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D 3017	(1988; R 1996e1) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
ASTM D 3212	(1996a) Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
ASTM D 3350	(1998a) Polyethylene Plastics Pipe and Fittings Materials
ASTM F 477	(1999) Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F 1417	(1992; R 1998) Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Placing Pipe;

Printed copies of the manufacturer's recommendations for installation procedures of the material being placed, prior to installation.

SD-04 Samples

Pipe for Culverts and Storm Drains;

Samples of the following materials, before work is started: PE.

SD-07 Certificates

Resin Certification;
Pipeline Testing;
Hydrostatic Test on Watertight Joints;
Determination of Density;
Frame and Cover for Gratings;

Certified copies of test reports demonstrating conformance to applicable pipe specifications, before pipe is installed. Certification on the ability of frame and cover or gratings to carry the imposed live load.

1.3 DELIVERY, STORAGE, AND HANDLING

1.3.1 Delivery and Storage

Materials delivered to site shall be inspected for damage, unloaded, and stored with a minimum of handling. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris. Before, during, and after installation, plastic pipe and fittings shall be protected from any environment that would result in damage or deterioration to the material. The Contractor shall have a copy of the manufacturer's instructions available at the construction site at all times and shall follow these instructions unless directed otherwise by the Contracting Officer. Solvents, solvent compounds, lubricants, elastomeric gaskets, and any similar materials required to install plastic pipe shall be stored in accordance with the manufacturer's recommendations and shall be discarded if the storage period exceeds the recommended shelf life. Solvents in use shall be discarded when the recommended pot life is exceeded.

1.3.2 Handling

Materials shall be handled in a manner that ensures delivery to the trench in sound, undamaged condition. Pipe shall be carried to the trench, not dragged.

PART 2 PRODUCTS

2.1 PIPE FOR CULVERTS AND STORM DRAINS

Pipe for culverts and storm drains shall be of the sizes indicated and shall conform to the requirements specified.

2.1.1 HDPE Pipe

The pipe manufacturer's resin certification indicating the cell classification of PE used to manufacture the pipe shall be submitted prior to installation of the pipe. The minimum cell classification for polyethylene plastic shall apply to each of the seven primary properties of the cell classification limits in accordance with ASTM D 3350.

2.1.1.1 Corrugated PE Pipe

AASHTO M 294, Type S or D, for pipes 12 to 48 inches and AASHTO MP 7, Type S or D, for pipes 54 to 60 inches produced from PE certified by the resin producer as meeting the requirements of ASTM D 3350, minimum cell class in accordance with AASHTO M 294. Pipe walls shall have the following properties:

Nominal Size (in.)	Minimum Wall Area (square in/ft)	Minimum Moment of Inertia of Wall Section (in to the 4th/in)
12	1.50	0.024
15	1.91	0.053
18	2.34	0.062
24	3.14	0.116
30	3.92	0.163
36	4.50	0.222
42	4.69	0.543
48	5.15	0.543
54	5.67	0.800
60	6.45	0.800

2.2 DRAINAGE STRUCTURES

2.2.1 Precast Reinforced Concrete Box

For highway loadings with 2 feet of cover or more or subjected to dead load only, ASTM C 789; for less than 2 feet of cover subjected to highway loading, ASTM C 850.

2.3 MISCELLANEOUS MATERIALS

2.3.1 Concrete

Unless otherwise specified, concrete and reinforced concrete shall conform to the requirements for 3500 psi concrete. The concrete mixture shall have air content by volume of concrete, based on measurements made immediately after discharge from the mixer, of 5 to 7 percent when maximum size of coarse aggregate exceeds 1-1/2 inches. Air content shall be determined in accordance with ASTM C 231. The concrete covering over steel reinforcing shall not be less than 1 inch thick for covers and not less than 1-1/2 inches thick for walls and flooring. Concrete covering deposited directly against the ground shall have a thickness of at least 3 inches between steel and ground. Expansion-joint filler material shall conform to ASTM D 1751, or ASTM D 1752, or shall be resin-impregnated fiberboard conforming to the physical requirements of ASTM D 1752.

2.3.2 Precast Reinforced Concrete Manholes

Precast reinforced concrete manholes shall conform to ASTM C 478. Joints between precast concrete risers and tops shall be made with flexible watertight, rubber-type gaskets meeting the requirements of paragraph JOINTS.

2.3.3 Frame and Cover for Gratings

Frame and cover for gratings shall be cast gray iron, ASTM A 48, Class 35B; cast ductile iron, ASTM A 536, Grade 65-45-12; or cast aluminum, ASTM B 26/B 26M, Alloy 356.OT6. Weight, shape, size, and waterway openings for grates and curb inlets shall be as indicated on the plans.

2.3.4 Joints

2.3.4.1 Flexible Watertight Joints

- a. Materials: Flexible watertight joints shall be made with plastic or rubber-type gaskets for concrete pipe and with factory-fabricated resilient materials for clay pipe. The design of joints and the physical requirements for plastic gaskets shall conform to AASHTO M 198, and rubber-type gaskets shall conform to ASTM C 443. Factory-fabricated

resilient joint materials shall conform to ASTM C 425. Gaskets shall have not more than one factory-fabricated splice, except that two factory-fabricated splices of the rubber-type gasket are permitted if the nominal diameter of the pipe being gasketed exceeds 54 inches.

- b. Test Requirements: Watertight joints shall be tested and shall meet test requirements of paragraph HYDROSTATIC TEST ON WATERTIGHT JOINTS. Rubber gaskets shall comply with the oil resistant gasket requirements of ASTM C 443. Certified copies of test results shall be delivered to the Contracting Officer before gaskets or jointing materials are installed. Alternate types of watertight joint may be furnished, if specifically approved.

2.3.4.2 Corrugated HDPE Plastic Pipe

Water tight joints shall be made using a PVC or PE coupling and rubber gaskets as recommended by the pipe manufacturer. Rubber gaskets shall conform to ASTM F 477. Soil tight joints shall conform to the requirements in AASHTO HB-16, Division II, Section 26.4.2.4. (e) for soil tightness and shall be as recommended by the pipe manufacturer.

2.4 STEEL LADDER

Steel ladder shall be provided where the depth of the manhole exceeds 12 feet. These ladders shall be not less than 16 inches in width, with 3/4 inch diameter rungs spaced 12 inches apart. The two stringers shall be a minimum 3/8 inch thick and 2-1/2 inches wide. Ladders and inserts shall be galvanized after fabrication in conformance with ASTM A 123/A 123M.

2.5 RESILIENT CONNECTORS

Flexible, watertight connectors used for connecting pipe to manholes and inlets shall conform to ASTM C 923.

2.6 HYDROSTATIC TEST ON WATERTIGHT JOINTS

2.6.1 Concrete, Clay, PVC and PE Pipe

A hydrostatic test shall be made on the watertight joint types as proposed. Only one sample joint of each type needs testing; however, if the sample joint fails because of faulty design or workmanship, an additional sample joint may be tested. During the test period, gaskets or other jointing material shall be protected from extreme temperatures which might adversely affect the performance of such materials. Performance requirements for joints in reinforced and nonreinforced concrete pipe shall conform to AASHTO M 198 or ASTM C 443. Test requirements for joints in PVC and PE plastic pipe shall conform to ASTM D 3212.

PART 3 EXECUTION

3.1 EXCAVATION FOR PIPE CULVERTS, STORM DRAINS, AND DRAINAGE STRUCTURES

Excavation of trenches, and for appurtenances and backfilling for culverts and storm drains, shall be in accordance with the applicable portions of Section 02316 "Excavation, Trenching, and Backfilling for Utilities Systems", Section 02300 "Earthwork," and the requirements specified below.

3.1.1 Trenching

The width of trenches at any point below the top of the pipe shall be not greater than the outside diameter of the pipe plus 12 inches to permit satisfactory jointing and thorough tamping of the bedding material under and around the pipe. Sheet piling and bracing, where required, shall be placed within the trench width as specified. Contractor shall not overexcavate. Where trench

widths are exceeded, redesign with a resultant increase in cost of stronger pipe or special installation procedures will be necessary. Cost of this redesign and increased cost of pipe or installation shall be borne by the Contractor without additional cost to the Government.

3.1.2 Removal of Rock

Rock in either ledge or boulder formation shall be replaced with suitable materials to provide a compacted earth cushion having a thickness between unremoved rock and the pipe of at least 8 inches or 1/2 inch for each foot of fill over the top of the pipe, whichever is greater, but not more than three-fourths the nominal diameter of the pipe. Where bell-and-spigot pipe is used, the cushion shall be maintained under the bell as well as under the straight portion of the pipe. Rock excavation shall be as specified and defined in Section 02316 "Excavation, Trenching, and Backfilling for Utilities Systems".

3.1.3 Removal of Unstable Material

Where wet or otherwise unstable soil incapable of properly supporting the pipe, as determined by the Contracting Officer, is unexpectedly encountered in the bottom of a trench, such material shall be removed to the depth required and replaced to the proper grade with select granular material, compacted as provided in paragraph BACKFILLING. When removal of unstable material is due to the fault or neglect of the Contractor in his performance of shoring and sheeting, water removal, or other specified requirements, such removal and replacement shall be performed at no additional cost to the government.

3.2 BEDDING

The bedding surface for the pipe shall provide a firm foundation of uniform density throughout the entire length of the pipe.

3.2.1 Plastic Pipe

Bedding for PVC and PE pipe shall meet the requirements of ASTM D 2321. Bedding, haunching, and initial backfill shall be either Class IB or II material.

3.3 PLACING PIPE

Each pipe shall be thoroughly examined before being laid; defective or damaged pipe shall not be used. Plastic pipe shall be protected from exposure to direct sunlight prior to laying, if necessary to maintain adequate pipe stiffness and meet installation deflection requirements. Pipelines shall be laid to the grades and alignment indicated. Proper facilities shall be provided for lowering sections of pipe into trenches. Lifting lugs in vertically elongated metal pipe shall be placed in the same vertical plane as the major axis of the pipe. Pipe shall not be laid in water, and pipe shall not be laid when trench conditions or weather are unsuitable for such work. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary. Deflection of installed flexible pipe shall not exceed the following limits:

TYPE OF PIPE	MAXIMUM ALLOWABLE DEFLECTION (%)
Plastic	7.5

Not less than 30 days after the completion of backfilling, the Government may perform a deflection test on the entire length of installed flexible pipe using a mandrel or other suitable device. Installed flexible pipe showing deflections greater than those indicated above shall be retested by a run from the opposite direction. If the retest also fails, the suspect pipe shall be replaced at no cost to the Government.

3.3.1 Concrete, Clay, PVC, Ribbed PVC and Ductile Iron Pipe

Laying shall proceed upgrade with spigot ends of bell-and-spigot pipe and tongue ends of tongue-and-groove pipe pointing in the direction of the flow.

3.3.2 Corrugated PE Pipe

Laying shall be with the separate sections joined firmly on a bed shaped to line and grade and shall follow manufacturer's recommendations.

3.4 DRAINAGE STRUCTURES

3.4.1 Manholes and Inlets

Construction shall be of precast reinforced concrete, complete with frames and covers or gratings; and with fixed galvanized steel ladders where indicated. Pipe connections to concrete manholes and inlets shall be made with flexible, watertight connectors.

3.4.2 Walls and Headwalls

Construction shall be as indicated.

3.5 STEEL LADDER INSTALLATION

Ladder shall be adequately anchored to the wall by means of steel inserts spaced not more than 6 feet vertically, and shall be installed to provide at least 6 inches of space between the wall and the rungs. The wall along the line of the ladder shall be vertical for its entire length.

3.6 BACKFILLING

3.6.1 Backfilling Pipe in Trenches

After the pipe has been properly bedded, selected material from excavation or borrow, at a moisture content that will facilitate compaction, shall be placed along both sides of pipe in layers not exceeding 6 inches in compacted depth. The backfill shall be brought up evenly on both sides of pipe for the full length of pipe. The fill shall be thoroughly compacted under the haunches of the pipe. Each layer shall be thoroughly compacted with mechanical tampers or rammers. This method of filling and compacting shall continue until the fill has reached an elevation of at least 12 inches above the top of the pipe. The remainder of the trench shall be backfilled and compacted by spreading and rolling or compacted by mechanical rammers or tampers in layers not exceeding 8 inches. Tests for density shall be made as necessary to ensure conformance to the compaction requirements specified below. Where it is necessary, in the opinion of the Contracting Officer, that sheeting or portions of bracing used be left in place, the contract will be adjusted accordingly. Untreated sheeting shall not be left in place beneath structures or pavements.

3.6.2 Backfilling Pipe in Fill Sections

For pipe placed in fill sections, backfill material and the placement and compaction procedures shall be as specified below. The fill material shall be uniformly spread in layers longitudinally on both sides of the pipe, not exceeding 6 inches in compacted depth, and shall be compacted by rolling parallel with pipe or by mechanical tamping or ramming. Prior to commencing normal filling operations, the crown width of the fill at a height of 12 inches above the top of the pipe shall extend a distance of not less than twice the outside pipe diameter on each side of the pipe or 12 feet, whichever is less. After the backfill has reached at least 12 inches above the top of the pipe, the remainder of the fill shall be placed and thoroughly compacted in layers not exceeding 8 inches.

3.6.3 Movement of Construction Machinery

When compacting by rolling or operating heavy equipment parallel with the pipe, displacement of or injury to the pipe shall be avoided. Movement of construction machinery over a culvert or storm drain at any stage of construction shall be at the Contractor's risk. Any damaged pipe shall be repaired or replaced.

3.6.4 Compaction

3.6.4.1 General Requirements

Cohesionless materials include gravels, gravel-sand mixtures, sands, and gravelly sands. Cohesive materials include clayey and silty gravels, gravel-silt mixtures, clayey and silty sands, sand-clay mixtures, clays, silts, and very fine sands. When results of compaction tests for moisture-density relations are recorded on graphs, cohesionless soils will show straight lines or reverse-shaped moisture-density curves, and cohesive soils will show normal moisture-density curves.

3.6.4.2 Minimum Density

Backfill over and around the pipe and backfill around and adjacent to drainage structures shall be compacted at the approved moisture content to the following applicable minimum density, which will be determined as specified below.

- a. Under airfield and heliport pavements, paved roads, streets, parking areas, and similar-use pavements including adjacent shoulder areas, the density shall be not less than 90 percent of maximum density for cohesive material and 95 percent of maximum density for cohesionless material, up to the elevation where requirements for pavement subgrade materials and compaction shall control.
- b. Under unpaved or turfed traffic areas, density shall not be less than 90 percent of maximum density for cohesive material and 95 percent of maximum density for cohesionless material.
- c. Under nontraffic areas, density shall be not less than that of the surrounding material.

3.6.5 Determination of Density

Testing shall be the responsibility of the Contractor and performed at no additional cost to the Government. Testing shall be performed by an approved commercial testing laboratory or by the Contractor subject to approval. Tests shall be performed in sufficient number to ensure that specified density is being obtained. Laboratory tests for moisture-density relations shall be made in accordance with ASTM D 1557 except that mechanical tampers may be used provided the results are correlated with those obtained with the specified hand tamper. Field density tests shall be determined in accordance with ASTM D 2167 or ASTM D 2922. When ASTM D 2922 is used, the calibration curves shall be checked and adjusted, if necessary, using the sand cone method as described in paragraph Calibration of the referenced publications. ASTM D 2922 results in a wet unit weight of soil and when using this method ASTM D 3017 shall be used to determine the moisture content of the soil. The calibration curves furnished with the moisture gauges shall be checked along with density calibration checks as described in ASTM D 3017 or ASTM D 2922. Test results shall be furnished the Contracting Officer. The calibration checks of both the density and moisture gauges shall be made at the beginning of a job on each different type of material encountered and at intervals as directed.

3.7 PIPELINE TESTING

Lines shall be tested for leakage by low pressure air or water testing or exfiltration tests, as appropriate. Low pressure air testing for plastic pipe shall conform to ASTM F 1417. Low pressure air testing procedures for other pipe materials shall use the pressures and testing times prescribed in ASTM C 828 or ASTM C 924, after consultation with the pipe manufacturer. Testing of individual joints for leakage by low pressure air or water shall conform to ASTM C 1103. Prior to exfiltration tests, the trench shall be backfilled up to at least the lower half of the pipe. If required, sufficient additional backfill shall be placed to prevent pipe movement during testing, leaving the joints uncovered to permit inspection. Visible leaks encountered shall be corrected regardless of leakage test results. When the water table is 2 feet or more above the top of the pipe at the upper end of the pipeline section to be tested, infiltration shall be measured using a suitable weir or other device acceptable to the Contracting Officer. An exfiltration test shall be made by filling the line to be tested with water so that a head of at least 2 feet is provided above both the water table and the top of the pipe at the upper end of the pipeline to be tested. The filled line shall be allowed to stand until the pipe has reached its maximum absorption, but not less than 4 hours. After absorption, the head shall be reestablished. The amount of water required to maintain this water level during a 2-hour test period shall be measured. Leakage as measured by the exfiltration test shall not exceed 0.2 gallons per inch in diameter per 100 feet of pipeline per hour. When leakage exceeds the maximum amount specified, satisfactory correction shall be made and retesting accomplished. Testing, correcting, and retesting shall be made at no additional cost to the Government.

-- End of Section --

SECTION 02741A

HOT-MIX ASPHALT (HMA) FOR ROADS
09/99

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO MP 1	(1998) Provisional Specification for Performance Graded Asphalt Binder
AASHTO MP 2	(1998; Interim 1999) Superpave Volumetric Mix Design
AASHTO TP53	(1998; Interim 1999) Determining Asphalt Content of Hot Mix Asphalt by the Ignition Method

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 29/C 29M	(1997) Bulk Density ("Unit Weight") and Voids in Aggregates
ASTM C 88	(1999a) Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C 117	(1995) Materials Finer than 75 micrometer (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 131	(1996) Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C 136	(1996a) Sieve Analysis of Fine and Coarse Aggregates
ASTM C 566	(1997) Evaporable Total Moisture Content of Aggregate by Drying
ASTM C 1252	(1998) Uncompacted Void Content of Fine Aggregate (as Influenced by Particle Shape, Surface Texture, and Grading)
ASTM D 140	(1998) Sampling Bituminous Materials
ASTM D 242	(1995) Mineral Filler for Bituminous Paving Mixtures
ASTM D 995	(1995b) Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures
ASTM D 1461	(1985) Moisture or Volatile Distillates in Bituminous Paving Mixtures

ASTM D 1559	(1989) Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
ASTM D 2041	(1995) Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D 2172	(1995) Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
ASTM D 2419	(1995) Sand Equivalent Value of Soils and Fine Aggregate
ASTM D 2489	(1984; R 1994el) Degree of Particle Coating of Bituminous-Aggregate Mixtures
ASTM D 2726	(1996el) Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixture
ASTM D 2950	(1997) Density of Bituminous Concrete in Place by Nuclear Method
ASTM D 3665	(1999) Random Sampling of Construction Materials
ASTM D 3666	(1998) Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Materials
ASTM D 4125	(1994el) Asphalt Content of Bituminous Mixtures by the Nuclear Method
ASTM D 4791	(1999) Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D 4867/D 4867M	(1996) Effect of Moisture on Asphalt Concrete Paving Mixtures
ASTM D 5444	(1998) Mechanical Size Analysis of Extracted Aggregate
ASTM D 6307	(1998) Asphalt Content of Hot Mix Asphalt by Ignition Method

ASPHALT INSTITUTE (AI)

AI MS-02	(1997) Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types
AI MS-22	(1998; 2nd Edition) Construction of Hot-Mix Asphalt Pavements

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CDT)

CDT Test 526	(1978) Operation of California Profilograph and Evaluation of Profiles
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U.S. ARMY CORPS OF ENGINEERS (USACE)

COE CRD-C 171	(1995) Test Method for Determining Percentage of Crushed Particles in Aggregate
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1.2 DESCRIPTION OF WORK

The work shall consist of pavement courses composed of mineral aggregate and

asphalt material heated and mixed in a central mixing plant and placed on a prepared course. HMA designed and constructed in accordance with this section shall conform to the lines, grades, thicknesses, and typical cross sections shown on the drawings. Each course shall be constructed to the depth, section, or elevation required by the drawings and shall be rolled, finished, and approved before the placement of the next course.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Mix Design; G, RE.

Proposed JMF.

Contractor Quality Control; G, RE.

Quality control plan.

SD-04 Samples

Asphalt Cement Binder.

(5 gallon) sample for mix design verification.

Aggregates.

Sufficient materials to produce 200 lb of blended mixture for mix design verification.

SD-06 Test Reports

Aggregates; G, RE.

QC Monitoring.

Aggregate and QC test results.

SD-07 Certificates

Asphalt Cement Binder; G, RE.

Copies of certified test data.

Testing Laboratory.

Certification of compliance.

Plant Scale Calibration Certification

1.4 ASPHALT MIXING PLANT

Plants used for the preparation of hot-mix asphalt shall conform to the requirements of ASTM D 995 with the following changes:

a. Truck Scales. The asphalt mixture shall be weighed on approved certified scales at the Contractor's expense. Scales shall be inspected and

sealed at least annually by an approved calibration laboratory.

b. Testing Facilities. The Contractor shall provide laboratory facilities at the plant for the use of the Government's acceptance testing and the Contractor's quality control testing.

c. Inspection of Plant. The Contracting Officer shall have access at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant; verifying weights, proportions, and material properties; checking the temperatures maintained in the preparation of the mixtures and for taking samples. The Contractor shall provide assistance as requested, for the Government to procure any desired samples.

d. Storage Bins. Use of storage bins for temporary storage of hot-mix asphalt will be permitted as follows:

(1) The asphalt mixture may be stored in non-insulated storage bins for a period of time not exceeding 3 hours.

(2) The asphalt mixture may be stored in insulated storage bins for a period of time not exceeding 8 hours. The mix drawn from bins shall meet the same requirements as mix loaded directly into trucks.

1.5 HAULING EQUIPMENT

Trucks used for hauling hot-mix asphalt shall have tight, clean, and smooth metal beds. To prevent the mixture from adhering to them, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other approved material. Petroleum based products shall not be used as a release agent. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated or heated and covers (tarps) shall be securely fastened.

1.6 ASPHALT PAVERS

Asphalt pavers shall be self-propelled, with an activated screed, heated as necessary, and shall be capable of spreading and finishing courses of hot-mix asphalt which will meet the specified thickness, smoothness, and grade. The paver shall have sufficient power to propel itself and the hauling equipment without adversely affecting the finished surface.

1.6.1 Receiving Hopper

The paver shall have a receiving hopper of sufficient capacity to permit a uniform spreading operation. The hopper shall be equipped with a distribution system to place the mixture uniformly in front of the screed without segregation. The screed shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture.

1.6.2 Automatic Grade Controls

If an automatic grade control device is used, the paver shall be equipped with a control system capable of automatically maintaining the specified screed elevation. The control system shall be automatically actuated from either a reference line and/or through a system of mechanical sensors or sensor-directed mechanisms or devices which will maintain the paver screed at a predetermined transverse slope and at the proper elevation to obtain the required surface. The transverse slope controller shall be capable of maintaining the screed at the desired slope within plus or minus 0.1 percent. A transverse slope controller shall not be used to control grade. The controls shall be capable of working in conjunction with any of the following attachments:

- a. Ski-type device of not less than 30 feet in length.
- b. Taut stringline set to grade.
- c. Short ski or shoe for joint matching.
- d. Laser control.

1.7 ROLLERS

Rollers shall be in good condition and shall be operated at slow speeds to avoid displacement of the asphalt mixture. The number, type, and weight of rollers shall be sufficient to compact the mixture to the required density while it is still in a workable condition. Equipment which causes excessive crushing of the aggregate shall not be used.

1.8 WEATHER LIMITATIONS

The hot-mix asphalt shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 1. The temperature requirements may be waived by the Contracting Officer, if requested; however, all other requirements, including compaction, shall be met.

Table 1. Surface Temperature Limitations of Underlying Course

Mat Thickness, inches	Degrees F
3 or greater	40
Less than 3	45

PART 2 PRODUCTS

2.1 AGGREGATES

Aggregates shall consist of crushed stone, crushed gravel, crushed slag, screenings, natural sand and mineral filler, as required. The portion of material retained on the No. 4 sieve is coarse aggregate. The portion of material passing the No. 4 sieve and retained on the No. 200 sieve is fine aggregate. The portion passing the No. 200 sieve is defined as mineral filler. All aggregate test results and samples shall be submitted to the Contracting Officer at least 14 days prior to start of construction.

2.1.1 Coarse Aggregate

Coarse aggregate shall consist of sound, tough, durable particles, free from films of material that would prevent thorough coating and bonding with the asphalt material and free from organic matter and other deleterious substances. All individual coarse aggregate sources shall meet the following requirements:

a. The percentage of loss shall not be greater than 40 percent after 500 revolutions when tested in accordance with ASTM C 131.

b. The percentage of loss shall not be greater than 18 percent after five cycles when tested in accordance with ASTM C 88 using magnesium sulfate or 12 percent when using sodium sulfate.

c. At least 75 percent by weight of coarse aggregate shall have at least two or more fractured faces when tested in accordance with COE CRD-C 171. Fractured faces shall be produced by crushing.

d. The particle shape shall be essentially cubical and the aggregate shall not contain more than 20% percent, by weight, of flat and elongated particles (3:1 ratio of maximum to minimum) when tested in accordance with ASTM D 4791.

e. Slag shall be air-cooled, blast furnace slag, and shall have a compacted weight of not less than 75 lb/cu ft when tested in accordance with ASTM C 29/C 29M.

2.1.2 Fine Aggregate

Fine aggregate shall consist of clean, sound, tough, durable particles. The aggregate particles shall be free from coatings of clay, silt, or any objectionable material and shall contain no clay balls. All individual fine aggregate sources shall have a sand equivalent value not less than 45 when tested in accordance with ASTM D 2419.

The fine aggregate portion of the blended aggregate shall have an uncompacted void content not less than 43.0 percent when tested in accordance with ASTM C 1252 Method A.

2.1.3 Mineral Filler

Mineral filler shall be nonplastic material meeting the requirements of ASTM D 242.

2.1.4 Aggregate Gradation

The combined aggregate gradation shall conform to gradations specified in Table 2, when tested in accordance with ASTM C 136 and ASTM C 117, and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve or vice versa, but grade uniformly from coarse to fine.

Table 2. Aggregate Gradations

<u>Sieve Size, inch</u>	<u>Gradation 1</u> <u>Percent Passing</u> <u>by Mass</u>	<u>Gradation 2</u> <u>Percent Passing</u> <u>by Mass</u>	<u>Gradation 3</u> <u>Percent Passing</u> <u>by Mass</u>
1	100	---	---
3/4	76-96	100	---
1/2	68-88	76-96	100
3/8	60-82	69-89	76-96
No. 4	45-67	53-73	58-78
No. 8	32-54	38-60	40-60
No. 16	22-44	26-48	28-48
No. 30	15-35	18-38	18-38
No. 50	9-25	11-27	11-27
No. 100	6-18	6-18	6-18
No. 200	3-6	3-6	3-6

2.2 ASPHALT CEMENT BINDER

Asphalt cement binder shall conform to AASHTO MP 1 Performance Grade (PG) 64-22.

Test data indicating grade certification shall be provided by the supplier at the time of delivery of each load to the mix plant. Copies of these certifications shall be submitted to the Contracting Officer. The supplier is defined as the last source of any modification to the binder. The Contracting Officer may sample and test the binder at the mix plant at any time before or during mix production. Samples for this verification testing shall be obtained by the Contractor in accordance with ASTM D 140 and in the presence of the Contracting Officer. These samples shall be furnished to the Contracting Officer for the verification testing, which shall be at no cost to the Contractor. Samples of the asphalt cement specified shall be submitted for approval not less than 14 days before start of the test section.

2.3 MIX DESIGN

The Contractor shall develop the mix design. The asphalt mix shall be composed of a mixture of well-graded aggregate, mineral filler if required, and asphalt material. The aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF). The hot-mix asphalt shall be designed using procedures contained in AI MS-02 and the criteria shown in Table 3. If the Tensile Strength Ratio (TSR) of the composite mixture, as determined by ASTM D 4867/D 4867M is less than 75, the aggregates shall be rejected or the asphalt mixture treated with an approved anti-stripping agent. The amount of anti-stripping agent added shall be sufficient to produce a TSR of not less than 75. If an antistrip agent is required, it shall be provided by the Contractor at no additional cost. Sufficient materials to produce 200 pound of blended mixture shall be provided to the Contracting Officer for verification of mix design at least 14 days prior to construction of test section.

At the option of the contractor a currently used DOT superpave hot mix may be used in lieu of developing a new hot mix design study as described herein. The superpave volumetric mix shall be designed in accordance with AASHTO MP 2.

2.3.1 JMF Requirements

The job mix formula shall be submitted in writing by the Contractor for approval at least 14 days prior to the start of the test section and shall include as a minimum:

- a. Percent passing each sieve size.
- b. Percent of asphalt cement.
- c. Percent of each aggregate and mineral filler to be used.
- d. Asphalt viscosity grade, penetration grade, or performance grade.
- e. Number of blows of hammer per side of molded specimen.
- f. Laboratory mixing temperature.
- g. Lab compaction temperature.
- h. Temperature-viscosity relationship of the asphalt cement.
- i. Plot of the combined gradation on the 0.45 power gradation chart, stating the nominal maximum size.
- j. Graphical plots of stability, flow, air voids, voids in the mineral aggregate, and unit weight versus asphalt content as shown in AI MS-02.
- k. Specific gravity and absorption of each aggregate.
- l. Percent natural sand.
- m. Percent particles with 2 or more fractured faces (in coarse aggregate).
- n. Fine aggregate angularity.
- o. Percent flat or elongated particles (in coarse aggregate).
- p. Tensile Strength Ratio(TSR).
- q. Antistrip agent (if required) and amount.
- r. List of all modifiers and amount.
- s. Percentage and properties (asphalt content, binder properties, and aggregate properties) of reclaimed asphalt pavement (RAP) in accordance with paragraph RECYCLED HOT-MIX ASPHALT, if RAP is used.

Table 3. Marshall Design Criteria

<u>Test Property</u>	<u>75 Blow Mix</u>	<u>50 Blow Mix</u>
Stability, pounds minimum	*1800	*1000
Flow, 0.01 inch	8-16	8-18
Air voids, percent	3-5	3-5
Percent Voids in mineral aggregate VMA, (minimum)		

Table 3. Marshall Design Criteria

Test Property	75 Blow Mix	50 Blow Mix
Gradation 1	13.0	13.0
Gradation 2	14.0	14.0
Gradation 3	15.0	15.0
TSR, minimum percent	75	75

* This is a minimum requirement. The average during construction shall be significantly higher than this number to ensure compliance with the specifications.

** Calculate VMA in accordance with AI MS-02, based on ASTM D 2726 bulk specific gravity for the aggregate.

2.3.2 Adjustments to Field JMF

The Laboratory JMF for each mixture shall be in effect until a new formula is approved in writing by the Contracting Officer. Should a change in sources of any materials be made, a new laboratory jmf design shall be performed and a new JMF approved before the new material is used. The Contractor will be allowed to adjust the Laboratory JMF within the limits specified below to optimize mix volumetric properties with the approval of the Contracting Officer. Adjustments to the Laboratory JMF shall be applied to the field (plant) established JMF and limited to those values as shown. Adjustments shall be targeted to produce or nearly produce 4 percent voids total mix (VTM).

TABLE 4. Field (Plant) Established JMF Tolerances
Sieves Adjustments (plus or minus), percent

No. 4	3
No. 8	3
No. 200	1
Binder Content	0.40

If adjustments are needed that exceed these limits, a new mix design shall be developed. Tolerances given above may permit the aggregate grading to be outside the limits shown in Table 2; while not desirable, this is acceptable.

2.4 RECYCLED HOT MIX ASPHALT

Recycled HMA shall consist of reclaimed asphalt pavement (RAP), coarse aggregate, fine aggregate, mineral filler, and asphalt cement. The RAP shall be of a consistent gradation and asphalt content and properties. When RAP is fed into the plant, the maximum RAP chunk size shall not exceed 2 inches. The recycled HMA mix shall be designed using procedures contained in AI MS-02 and AI MS-22. The job mix shall meet the requirements of paragraph MIX DESIGN. The amount of RAP shall not exceed 30 percent.

2.4.1 RAP Aggregates and Asphalt Cement

The blend of aggregates used in the recycled mix shall meet the requirements of paragraph AGGREGATES. The percentage of asphalt in the RAP shall be established for the mixture design according to ASTM D 2172 using the appropriate dust correction procedure.

2.4.2 RAP Mix

The blend of new asphalt cement and the RAP asphalt binder shall meet the dynamic shear rheometer at high temperature and bending beam at low temperature requirements in paragraph ASPHALT CEMENT BINDER. The virgin asphalt cement shall

not be more than two standard asphalt material grades different than that specified in paragraph ASPHALT CEMENT BINDER.

PART 3 EXECUTION

3.1 PREPARATION OF ASPHALT BINDER MATERIAL

The asphalt cement material shall be heated avoiding local overheating and providing a continuous supply of the asphalt material to the mixer at a uniform temperature. The temperature of unmodified asphalts shall be no more than 325 degrees F when added to the aggregates. Modified asphalts shall be no more than 350 degrees F when added to the aggregates.

3.2 PREPARATION OF MINERAL AGGREGATE

The aggregate for the mixture shall be heated and dried prior to mixing. No damage shall occur to the aggregates due to the maximum temperature and rate of heating used. The temperature of the aggregate and mineral filler shall not exceed 350 degrees F when the asphalt cement is added. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

3.3 PREPARATION OF HOT-MIX ASPHALT MIXTURE

The aggregates and the asphalt cement shall be weighed or metered and introduced into the mixer in the amount specified by the JMF. The combined materials shall be mixed until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture, but no less than 25 seconds for batch plants. The wet mixing time for all plants shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D 2489, for each individual plant and for each type of aggregate used. The wet mixing time will be set to at least achieve 95 percent of coated particles. The moisture content of all hot-mix asphalt upon discharge from the plant shall not exceed 0.5 percent by total weight of mixture as measured by ASTM D 1461.

3.4 PREPARATION OF THE UNDERLYING SURFACE

Immediately before placing the hot mix asphalt, the underlying course shall be cleaned of dust and debris. A tack coat shall be applied in accordance with the contract specifications.

3.5 TEST SECTION

Prior to full production, the Contractor shall place a test section for each JMF used. The contractor shall construct a test section 250 - 500 feet long and two paver passes wide placed for two lanes, with a longitudinal cold joint. The test section shall be of the same depth as the course which it represents. The underlying grade or pavement structure upon which the test section is to be constructed shall be the same as the remainder of the course represented by the test section. The equipment and personnel used in construction of the test section shall be the same equipment to be used on the remainder of the course represented by the test section. The test section shall be placed as part of the project pavement as approved by the Contracting Officer.

3.5.1 Sampling and Testing for Test Section

One random sample shall be taken at the plant, triplicate specimens compacted, and tested for stability, flow, and laboratory air voids. A portion of the same sample shall be tested for aggregate gradation and asphalt content. Four randomly selected cores shall be taken from the finished pavement mat, and four from the longitudinal joint, and tested for density. Random sampling shall be in

accordance with procedures contained in ASTM D 3665. The test results shall be within the tolerances shown in Table 5 for work to continue. If all test results meet the specified requirements, the test section shall remain as part of the project pavement. If test results exceed the tolerances shown, the test section shall be removed and replaced at no cost to the Government and another test section shall be constructed. The test section shall be paid for with the first lot of paving

Table 5. Test Section Requirements for Material and Mixture Properties

<u>Property</u>	<u>Specification Limit</u>
Aggregate Gradation-Percent Passing (Individual Test Result)	
No. 4 and larger	JMF plus or minus 8
No. 8, No. 16, No. 30, and No. 50	JMF plus or minus 6
No. 100 and No. 200	JMF plus or minus 2.0
Asphalt Content, Percent (Individual Test Result)	JMF plus or minus 0.5
Laboratory Air Voids, Percent (Average of 3 specimens)	JMF plus or minus 1.0
VMA, Percent (Average of 3 specimens)	14 minimum
Stability, pounds (Average of 3 specimens)	1800 minimum
Flow, 0.01 inches (Average of 3 specimens)	8 - 16
Mat Density, Percent of Marshall (Average of 4 Random Cores)	97.0 - 100.5
Joint Density, Percent of Marshall (Average of 4 Random Cores)	95.5 - 100.5

3.5.2 Additional Test Sections

If the initial test section should prove to be unacceptable, the necessary adjustments to the JMF, plant operation, placing procedures, and/or rolling procedures shall be made. A second test section shall then be placed. Additional test sections, as required, shall be constructed and evaluated for conformance to the specifications. Full production shall not begin until an acceptable section has been constructed and accepted.

3.6 TESTING LABORATORY

The laboratory used to develop the JMF shall meet the requirements of ASTM D 3666.

A certification signed by the manager of the laboratory stating that it meets these requirements or clearly listing all deficiencies shall be submitted to the Contracting Officer prior to the start of construction. The certification shall contain as a minimum:

- a. Qualifications of personnel; laboratory manager, supervising technician, and testing technicians.
- b. A listing of equipment to be used in developing the job mix.
- c. A copy of the laboratory's quality control system.

d. Evidence of participation in the AASHTO Materials Reference Laboratory (AMRL) program.

3.7 TRANSPORTING AND PLACING

3.7.1 Transporting

The hot-mix asphalt shall be transported from the mixing plant to the site in clean, tight vehicles. Deliveries shall be scheduled so that placing and compacting of mixture is uniform with minimum stopping and starting of the paver.

Adequate artificial lighting shall be provided for night placements. Hauling over freshly placed material will not be permitted until the material has been compacted as specified, and allowed to cool to 140 degrees F. To deliver mix to the paver, the Contractor shall use a material transfer vehicle which shall be operated to produce continuous forward motion of the paver.

3.7.2 Placing

The mix shall be placed and compacted at a temperature suitable for obtaining density, surface smoothness, and other specified requirements. Upon arrival, the mixture shall be placed to the full width by an asphalt paver; it shall be struck off in a uniform layer of such depth that, when the work is completed, it shall have the required thickness and conform to the grade and contour indicated.

The speed of the paver shall be regulated to eliminate pulling and tearing of the asphalt mat. Unless otherwise permitted, placement of the mixture shall begin along the centerline of a crowned section or on the high side of areas with a one-way slope. The mixture shall be placed in consecutive adjacent strips having a minimum width of 10 feet. The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least 1 foot; however, the joint in the surface course shall be at the centerline of the pavement. Transverse joints in one course shall be offset by at least 10 feet from transverse joints in the previous course. Transverse joints in adjacent lanes shall be offset a minimum of 10 feet. On isolated areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the mixture may be spread and luted by hand tools.

3.8 COMPACTION OF MIXTURE

After placing, the mixture shall be thoroughly and uniformly compacted by rolling. The surface shall be compacted as soon as possible without causing displacement, cracking or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor. The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture and be effective in compaction. Any displacement occurring as a result of reversing the direction of the roller, or from any other cause, shall be corrected at once. Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until the surface is of uniform texture, true to grade and cross section, and the required field density is obtained. To prevent adhesion of the mixture to the roller, the wheels shall be kept properly moistened but excessive water will not be permitted. In areas not accessible to the roller, the mixture shall be thoroughly compacted with hand tampers. Any mixture that becomes loose and broken, mixed with dirt, contains check-cracking, or is in any way defective shall be removed full depth, replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching will not be allowed.

3.9 JOINTS

The formation of joints shall be made ensuring a continuous bond between the courses and to obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade.

3.9.1 Transverse Joints

The roller shall not pass over the unprotected end of the freshly laid mixture, except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing material at the joint. The cutback material shall be removed from the project. In both methods, all contact surfaces shall be given a light tack coat of asphalt material before placing any fresh mixture against the joint.

3.9.2 Longitudinal Joints

Longitudinal joints which are irregular, damaged, uncompacted, cold (less than 175 degrees F at the time of placing adjacent lanes), or otherwise defective, shall be cut back a minimum of 2 inches from the edge with a cutting wheel to expose a clean, sound vertical surface for the full depth of the course. All cutback material shall be removed from the project. All contact surfaces shall be given a light tack coat of asphalt material prior to placing any fresh mixture against the joint. The Contractor will be allowed to use an alternate method if it can be demonstrated that density, smoothness, and texture can be met.

3.10 CONTRACTOR QUALITY CONTROL

3.10.1 General Quality Control Requirements

The Contractor shall develop an approved Quality Control Plan. Hot-mix asphalt for payment shall not be produced until the quality control plan has been approved. The plan shall address all elements which affect the quality of the pavement including, but not limited to:

- a. Mix Design
- b. Aggregate Grading
- c. Quality of Materials
- d. Stockpile Management
- e. Proportioning
- f. Mixing and Transportation
- g. Mixture Volumetrics
- h. Moisture Content of Mixtures
- i. Placing and Finishing
- j. Joints
- k. Compaction
- l. Surface Smoothness

3.10.2 Testing Laboratory

The Contractor shall provide a fully equipped asphalt laboratory located at the plant or job site. The laboratory shall meet the requirements as required in ASTM D 3666. The effective working area of the laboratory shall be a minimum of 150 square feet with a ceiling height of not less than 7.5 feet. Lighting shall be adequate to illuminate all working areas. It shall be equipped with

heating and air conditioning units to maintain a temperature of 75 degrees F plus or minus 5 degrees F. Laboratory facilities shall be kept clean and all equipment shall be maintained in proper working condition. The Contracting Officer shall be permitted unrestricted access to inspect the Contractor's laboratory facility, to witness quality control activities, and to perform any check testing desired. The Contracting Officer will advise the Contractor in writing of any noted deficiencies concerning the laboratory facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to adversely affect test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are corrected.

3.10.3 Quality Control Testing

The Contractor shall perform all quality control tests applicable to these specifications and as set forth in the Quality Control Program. The testing program shall include, but shall not be limited to, tests for the control of asphalt content, aggregate gradation, temperatures, aggregate moisture, moisture in the asphalt mixture, laboratory air voids, stability, flow, in-place density, grade and smoothness. A Quality Control Testing Plan shall be developed as part of the Quality Control Program.

3.10.3.1 Asphalt Content

A minimum of two tests to determine asphalt content will be performed per lot (a lot is defined in paragraph MATERIAL ACCEPTANCE AND PERCENT PAYMENT) by one of the following methods: the extraction method in accordance with ASTM D 2172, Method A or B, the ignition method in accordance with the AASHTO TP53 or ASTM D 6307, or the nuclear method in accordance with ASTM D 4125, provided the nuclear gauge is calibrated for the specific mix being used. For the extraction method, the weight of ash, as described in ASTM D 2172, shall be determined as part of the first extraction test performed at the beginning of plant production; and as part of every tenth extraction test performed thereafter, for the duration of plant production. The last weight of ash value obtained shall be used in the calculation of the asphalt content for the mixture.

3.10.3.2 Gradation

Aggregate gradations shall be determined a minimum of twice per lot from mechanical analysis of recovered aggregate in accordance with ASTM D 5444. When asphalt content is determined by the nuclear method, aggregate gradation shall be determined from hot bin samples on batch plants, or from the cold feed on drum mix plants. For batch plants, aggregates shall be tested in accordance with ASTM C 136 using actual batch weights to determine the combined aggregate gradation of the mixture.

3.10.3.3 Temperatures

Temperatures shall be checked at least four times per lot, at necessary locations, to determine the temperature at the dryer, the asphalt cement in the storage tank, the asphalt mixture at the plant, and the asphalt mixture at the job site.

3.10.3.4 Aggregate Moisture

The moisture content of aggregate used for production shall be determined a minimum of once per lot in accordance with ASTM C 566.

3.10.3.5 Moisture Content of Mixture

The moisture content of the mixture shall be determined at least once per lot in accordance with ASTM D 1461 or an approved alternate procedure.

3.10.3.6 Laboratory Air Voids, Marshall Stability and Flow

Mixture samples shall be taken at least four times per lot and compacted into specimens, using 50 blows per side with the Marshall hammer as described in ASTM D 1559. After compaction, the laboratory air voids of each specimen shall be determined, as well as the Marshall stability and flow.

3.10.3.7 In-Place Density

The Contractor shall conduct any necessary testing to ensure the specified density is achieved. A nuclear gauge may be used to monitor pavement density in accordance with ASTM D 2950.

3.10.3.8 Grade and Smoothness

The Contractor shall conduct the necessary checks to ensure the grade and smoothness requirements are met in accordance with paragraph MATERIAL ACCEPTANCE AND PERCENT PAYMENT.

3.10.3.9 Additional Testing

Any additional testing, which the Contractor deems necessary to control the process, may be performed at the Contractor's option.

3.10.3.10 QC Monitoring

The Contractor shall submit all QC test results to the Contracting Officer on a daily basis as the tests are performed. The Contracting Officer reserves the right to monitor any of the Contractor's quality control testing and to perform duplicate testing as a check to the Contractor's quality control testing.

3.10.4 Sampling

When directed by the Contracting Officer, the Contractor shall sample and test any material which appears inconsistent with similar material being produced, unless such material is voluntarily removed and replaced or deficiencies corrected by the Contractor. All sampling shall be in accordance with standard procedures specified.

3.10.5 Control Charts

For process control, the Contractor shall establish and maintain linear control charts on both individual samples and the running average of last four samples for the parameters listed in Table 6, as a minimum. These control charts shall be posted as directed by the Contracting Officer and shall be kept current at all times. The control charts shall identify the project number, the test parameter being plotted, the individual sample numbers, the Action and Suspension Limits listed in Table 6 applicable to the test parameter being plotted, and the Contractor's test results. Target values from the JMF shall also be shown on the control charts as indicators of central tendency for the cumulative percent passing, asphalt content, and laboratory air voids parameters. When the test results exceed either applicable Action Limit, the Contractor shall take immediate steps to bring the process back in control. When the test results exceed either applicable Suspension Limit, the Contractor shall halt production until the problem is solved. The Contractor shall use the control charts as part of the process control system for identifying trends so that potential problems can be corrected before they occur. Decisions concerning mix modifications shall be made based on analysis of the results provided in the control charts. The Quality Control Plan shall indicate the appropriate action which shall be taken to bring the process into control when certain parameters exceed their Action Limits.

Table 6. Action and Suspension Limits for the Parameters to be Plotted on
Individual and Running Average Control Charts

Parameter to be Plotted	Running Average of <u>Individual Samples</u>		<u>Last Four Samples</u>	
	Action Limit	Suspension Limit	Action Limit	Suspension Limit

No. 4 sieve, Cumulative % Passing, deviation from JMF target; plus or minus values	6	8	4	5
No. 30 sieve, Cumulative % Passing, deviation from JMF target; plus or minus values	4	6	3	4
No. 200 sieve, Cumulative % Passing, deviation from JMF target; plus or minus values	1.4	2.0	1.1	1.5
Stability, pounds (minimum)				
75 Blow JMF	1800	1700	1900	1800
50 Blow JMF	1000	900	1100	1000
Flow, 0.01 inches				
75 Blow	8 min. 16 max.	7 min. 17 max.	9 min. 15 max.	8 min. 16 max.
50 Blow	8 min. 18 max.	7 min. 19 max.	9 min. 17 max.	8 min. 18 max.
Asphalt content, % deviation from JMF target; plus or minus value	0.4	0.5	0.2	0.3
Laboratory Air Voids, % deviation from JMF target value	No specific action and suspension limits set since this parameter is used to determine percent payment			
In-place Mat Density, % of Marshall density	No specific action and suspension limits set since this parameter is used to determine percent payment			
In-place Joint Density, % of Marshall density	No specific action and suspension limits set since this parameter is used to determine percent payment			

3.11 MATERIAL ACCEPTANCE

Testing for acceptability of work will be performed by an independent laboratory hired by the Contractor. Test results and payment calculations shall be forwarded daily to the Contracting Officer. Acceptance of the plant produced mix and in-place requirements will be on a lot to lot basis. A standard lot for all requirements will be equal to 2000 tons. Where appropriate, adjustment in payment for individual lots of hot-mix asphalt will be made based on in-place density, laboratory air voids, grade and smoothness in accordance with the following paragraphs. Grade and surface smoothness determinations will be made on the lot as a whole. Exceptions or adjustments to this will be made in situations where the mix within one lot is placed as part of both the intermediate and surface courses, thus grade and smoothness measurements for the entire lot cannot be made. In order to evaluate laboratory air voids and in-place (field) density, each lot will be divided into four equal sublots.

3.11.1 Sublot Sampling

One random mixture sample for determining laboratory air voids, theoretical maximum density, and for any additional testing the Contracting Officer desires, will be taken from a loaded truck delivering mixture to each sublot, or other appropriate location for each sublot. All samples will be selected randomly, using commonly recognized methods of assuring randomness conforming to ASTM D 3665 and employing tables of random numbers or computer programs. Laboratory air voids will be determined from three laboratory compacted specimens of each sublot sample in accordance with ASTM D 1559. The specimens will be compacted within 2 hours of the time the mixture was loaded into trucks at the asphalt plant. Samples will not be reheated prior to compaction and insulated containers will be used as necessary to maintain the temperature.

3.11.2 Additional Sampling and Testing

The Contracting Officer reserves the right to direct additional samples and tests for any area which appears to deviate from the specification requirements. The cost of any additional testing will be paid for by the Government. Testing in these areas will be in addition to the lot testing, and the requirements for these areas will be the same as those for a lot.

3.11.3 Laboratory Air Voids

Laboratory air voids will be calculated by determining the Marshall density of each lab compacted specimen using ASTM D 2726 and determining the theoretical maximum density of every other sublot sample using ASTM D 2041. Laboratory air void calculations for each sublot will use the latest theoretical maximum density values obtained, either for that sublot or the previous sublot. The mean absolute deviation of the four laboratory air void contents (one from each sublot) from the JMF air void content will be evaluated and a pay factor determined from Table 7. All laboratory air void tests will be completed and reported within 24 hours after completion of construction of each lot.

3.11.4 Mean Absolute Deviation

An example of the computation of mean absolute deviation for laboratory air voids is as follows: Assume that the laboratory air voids are determined from 4 random samples of a lot (where 3 specimens were compacted from each sample). The average laboratory air voids for each sublot sample are determined to be 3.5, 3.0, 4.0, and 3.7. Assume that the target air voids from the JMF is 4.0. The mean absolute deviation is then:

$$\text{Mean Absolute Deviation} = (|3.5 - 4.0| + |3.0 - 4.0| + |4.0 - 4.0| + |3.7 - 4.0|) / 4$$

$$= (0.5 + 1.0 + 0.0 + 0.3) / 4 = (1.8) / 4 = 0.45$$

The mean absolute deviation for laboratory air voids is determined to be 0.45. It can be seen from Table 7 that the lot's pay factor based on laboratory air voids, is 100 percent.

Table 7. Pay Factor Based on Laboratory Air Voids	
Mean Absolute Deviation of Lab Air Voids from JMF	Pay Factor, %
0.60 or less	100
0.61 - 0.80	98
0.81 - 1.00	95
1.01 - 1.20	90
Above 1.20	reject (0)

3.11.5 In-place Density

3.11.5.1 General Density Requirements

For determining in-place density, one random core will be taken by the Government from the mat (interior of the lane) of each subplot, and one random core will be taken from the joint (immediately over joint) of each subplot. Each random core will be full thickness of the layer being placed. When the random core is less than 1 inch thick, it will not be included in the analysis. In this case, another random core will be taken. After air drying to a constant weight, cores obtained from the mat and from the joints will be used for in-place density determination.

3.11.5.2 Mat and Joint Densities

The average in-place mat and joint densities are expressed as a percentage of the average Marshall density for the lot. The Marshall density for each lot will be determined as the average Marshall density of the four random samples (3 specimens compacted per sample). The average in-place mat density and joint density for a lot are determined and compared with Table 8 to calculate a single pay factor per lot based on in-place density, as described below. First, a pay factor for both mat density and joint density are determined from Table 8. The area associated with the joint is then determined and will be considered to be 10 feet wide times the length of completed longitudinal construction joint in the lot. This area will not exceed the total lot size. The length of joint to be considered will be that length where a new lane has been placed against an adjacent lane of hot-mix asphalt pavement, either an adjacent freshly paved lane or one paved at any time previously. The area associated with the joint is expressed as a percentage of the total lot area. A weighted pay factor for the joint is determined based on this percentage (see example below). The pay factor for mat density and the weighted pay factor for joint density is compared and the lowest selected. This selected pay factor is the pay factor based on density for the lot. When the Marshall density on both sides of a longitudinal joint is different, the average of these two densities will be used as the Marshall density needed to calculate the percent joint density. All density results for a lot will be completed and reported within 24 hours after the construction of that lot.

Table 8. Pay Factor Based on In-place Density

Average Mat Density (4 Cores)	Pay Factor, %	Average Joint Density (4 Cores)
97.9 or 100	100.0	96.4 or above
97.8 or 100.1	99.9	96.3
97.7	99.8	96.2
97.6 or 100.2	99.6	96.1
97.5	99.4	96.0
97.4 or 100.3	99.1	95.9
97.3	98.7	95.8
97.2 or 100.4	98.3	95.7
97.1	97.8	95.6
97.0 or 100.5	97.3	95.5
96.9	96.3	95.4
96.8 or 100.6	94.1	95.3
96.7	92.2	95.2
96.6 or 100.7	90.3	95.1
96.5	87.9	95.0
96.4 or 100.8	85.7	94.9
96.3	83.3	94.8
96.2 or 100.9	80.6	94.7
96.1	78.0	94.6
96.0 or 101.0	75.0	94.5

Table 8. Pay Factor Based on In-place Density

Average Mat Density (4 Cores)	Pay Factor, %	Average Joint Density (4 Cores)
below 96.0 or above 101.0	0.0 (reject)	below 94.5

3.11.6 Grade

The final wearing surface of pavement shall conform to the elevations and cross sections shown and shall vary not more than 0.05 foot from the plan grade established and approved at site of work. Finished surfaces at juncture with other pavements shall coincide with finished surfaces of abutting pavements. Deviation from the plan elevation will not be permitted in areas of pavements where closer conformance with planned elevation is required for the proper functioning of drainage and other appurtenant structures involved. The final wearing surface of the pavement will be tested for conformance with specified plan grade requirements. The grade will be determined by running lines of levels at intervals of 25 feet, or less, longitudinally and transversely, to determine the elevation of the completed pavement surface. Within 5 working days, after the completion of a particular lot incorporating the final wearing surface, the Contracting Officer will inform the Contractor in writing, of the results of the grade-conformance tests. When more than 5 percent of all measurements made within a lot are outside the 0.05 foot tolerance, the pay factor based on grade for that lot will be 95 percent. In areas where the grade exceeds the tolerance by more than 50 percent, the Contractor shall remove the surface lift full depth; the Contractor shall then replace the lift with hot-mix asphalt to meet specification requirements, at no additional cost to the Government. Diamond grinding may be used to remove high spots to meet grade requirements. Skin patching for correcting low areas or planing or milling for correcting high areas will not be permitted.

3.11.7 Surface Smoothness

The Contractor shall use one of the following methods to test and evaluate surface smoothness of the pavement. All testing shall be performed in the presence of the Contracting Officer. Detailed notes of the results of the testing shall be kept and a copy furnished to the Government immediately after each day's testing. The profilograph method shall be used for all longitudinal and transverse testing, except where the runs would be less than 200 feet in length and the ends where the straightedge shall be used. Where drawings show required deviations from a plane surface (crowns, drainage inlets, etc.), the surface shall be finished to meet the approval of the Contracting Officer.

3.11.7.1 Smoothness Requirements

a. Straightedge Testing: The finished surfaces of the pavements shall have no abrupt change of 1/4 inch or more, and all pavements shall be within the tolerances specified in Table 9 when checked with an approved 12 foot straightedge.

Table 9. Straightedge Surface Smoothness--Pavements

Pavement Category	Direction of Testing	Tolerance, inches
All paved areas	Longitudinal	1/4
	Transverse	1/4

b. Profilograph Testing: The finished surfaces of the pavements shall have no abrupt change of 1/8 inch or more, and all pavement shall have a Profile Index not greater than specified in Table 10 when tested with an approved California-type profilograph. If the extent of the pavement in either direction is less than 200 feet, that direction shall be tested by the straightedge method

and shall meet requirements specified above.

Table 10. Profilograph Surface Smoothness--Pavements

Pavement Category	Direction of Testing	Maximum Specified Profile Index (inch/mile)
-----	-----	-----
All Paved Areas	Longitudinal	9

3.11.7.2 Testing Method

After the final rolling, but not later than 24 hours after placement, the surface of the pavement in each entire lot shall be tested by the Contractor in such a manner as to reveal all surface irregularities exceeding the tolerances specified above. Separate testing of individual sublots is not required. If any pavement areas are ground, these areas shall be retested immediately after grinding. The entire area of the pavement shall be tested in both a longitudinal and a transverse direction on parallel lines. The transverse lines shall be 25 feet or less apart, as directed. The longitudinal lines shall be at the centerline of each paving lane for lines less than 20 feet and at the third points for lanes 20 feet or greater. Other areas having obvious deviations shall also be tested. Longitudinal testing lines shall be continuous across all joints.

a. Straightedge Testing. The straightedge shall be held in contact with the surface and moved ahead one-half the length of the straightedge for each successive measurement. The amount of surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between these two high points.

b. Profilograph Testing. Profilograph testing shall be performed using approved equipment and procedures described in CDT Test 526. The equipment shall utilize electronic recording and automatic computerized reduction of data to indicate "must-grind" bumps and the Profile Index for the pavement. The "blanking band" shall be 0.2 inches wide and the "bump template" shall span 1 inch with an offset of 0.4 inch. The profilograph shall be operated by an approved, factory-trained operator on the alignments specified above. A copy of the reduced tapes shall be furnished the Government at the end of each day's testing.

-- End of Section --

SECTION 02770A

CONCRETE SIDEWALKS AND CURBS AND GUTTERS
03/98

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO M 182 (1991) Burlap Cloth Made from Jute or Kenaf

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 185	(1997) Steel Welded Wire Fabric, Plain, for Concrete Reinforcement
ASTM A 615/A 615M	(1996a) Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
ASTM A 616/A 616M	(1996a) Rail-Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A 617/A 617M	(1996a) Axle-Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM C 31/C 31M	(1996) Making and Curing Concrete Test Specimens in the Field
ASTM C 143	(1990a) Slump of Hydraulic Cement Concrete
ASTM C 171	(1997) Sheet Materials for Curing Concrete
ASTM C 172	(1997) Sampling Freshly Mixed Concrete
ASTM C 173	(1996) Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C 231	(1997el) Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C 309	(1997) Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C 920	(1995) Elastomeric Joint Sealants
ASTM D 1751	(1999) Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D 1752	(1984; R 1996el) Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction

ASTM D 3405

(1996) Joint Sealants, Hot-Applied, for Concrete and Asphalt Pavements

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Manufactured Material and Product; G, RE.

Certified Delivery Tickets; G, RE.

Copies of certified delivery tickets for all concrete used in the construction.

SD-04 Samples

Strength Test; G, RE.

The Contractor shall submit molded concrete specimens for strength tests. Samples shall be taken at least once per day.

SD-06 Test Reports

Field Quality Control; G, RE.

The Contractor shall submit test results for concrete strength, air content, slump, thickness, and surface value.

Material Test Report; G, RE.

Copies of all aggregate test reports shall be submitted within 24 hours of completion of the test.

1.3 WEATHER LIMITATIONS

1.3.1 Placing During Cold Weather

Concrete placement shall not take place when the air temperature reaches 40 degrees F and is falling, or is already below that point. Placement may begin when the air temperature reaches 35 degrees F and is rising, or is already above 40 degrees F. Provisions shall be made to protect the concrete from freezing during the specified curing period. If necessary to place concrete when the temperature of the air, aggregates, or water is below 35 degrees F, placement and protection shall be approved in writing. Approval will be contingent upon full conformance with the following provisions. The underlying material shall be prepared and protected so that it is entirely free of frost when the concrete is deposited. Mixing water and aggregates shall be heated as necessary to result in the temperature of the in-place concrete being between 50 and 85 degrees F. Methods and equipment for heating shall be approved. The aggregates shall be free of ice, snow, and frozen lumps before entering the mixer. Covering and other means shall be provided for maintaining the concrete at a temperature of at least 50 degrees F for not less than 72 hours after placing, and at a temperature above freezing for the remainder of the curing period.

1.3.2 Placing During Warm Weather

The temperature of the concrete as placed shall not exceed 85 degrees F except

where an approved retarder is used. The mixing water and/or aggregates shall be cooled, if necessary, to maintain a satisfactory placing temperature. The placing temperature shall not exceed 95 degrees F at any time.

1.4 PLANT, EQUIPMENT, MACHINES, AND TOOLS

1.4.1 General Requirements

Plant, equipment, machines, and tools used in the work shall be subject to approval and shall be maintained in a satisfactory working condition at all times. The equipment shall have the capability of producing the required product, meeting grade controls, thickness control and smoothness requirements as specified. Use of the equipment shall be discontinued if it produces unsatisfactory results. The Contracting Officer shall have access at all times to the plant and equipment to ensure proper operation and compliance with specifications.

1.4.2 Slip Form Equipment

Slip form paver or curb forming machine, will be approved based on trial use on the job and shall be self-propelled, automatically controlled, crawler mounted, and capable of spreading, consolidating, and shaping the plastic concrete to the desired cross section in 1 pass.

PART 2 PRODUCTS

2.1 PRODUCT DATA

For each type of manufactured material and product indicated in this specification, the Contractor shall submit the manufacturer's descriptive literature. The aggregate used shall be tested, and a material test report submitted within 24 hours of completion of the test.

2.2 CONCRETE

Concrete shall have a minimum compressive strength of 3500 psi at 28 days. Maximum size of aggregate shall be 1-1/2 inches. For all concrete used in the construction, the Contractor shall submit copies of certified delivery tickets.

2.2.1 Air Content

Mixtures shall have air content by volume of concrete of 5 to 7 percent, based on measurements made immediately after discharge from the mixer.

2.2.2 Slump

The concrete slump shall be 2 inches plus or minus 1 inch where determined in accordance with ASTM C 143.

2.2.3 Reinforcement Steel

Reinforcement bars shall conform to ASTM A 615/A 615M, ASTM A 616/A 616M, or ASTM A 617/A 617M. Wire mesh reinforcement shall conform to ASTM A 185.

2.3 CONCRETE CURING MATERIALS

2.3.1 Impervious Sheet Materials

Impervious sheet materials shall conform to ASTM C 171, type optional, except that polyethylene film, if used, shall be white opaque.

2.3.2 Burlap

Burlap shall conform to AASHTO M 182.

2.3.3 White Pigmented Membrane-Forming Curing Compound

White pigmented membrane-forming curing compound shall conform to ASTM C 309, Type 2.

2.4 CONCRETE PROTECTION MATERIALS

Concrete protection materials shall be a linseed oil mixture of equal parts, by volume, of linseed oil and either mineral spirits, naphtha, or turpentine. At the option of the contractor, commercially prepared linseed oil mixtures, formulated specifically for application to concrete to provide protection against the action of deicing chemicals may be used, except that emulsified mixtures are not acceptable.

2.5 JOINT FILLER STRIPS

2.5.1 Contraction Joint Filler for Curb and Gutter

Contraction joint filler for curb and gutter shall consist of hard-pressed fiberboard.

2.5.2 Expansion Joint Filler, Premolded

Expansion joint filler, premolded, shall conform to ASTM D 1751 or ASTM D 1752, 3/8 inch thick, unless otherwise indicated.

2.6 JOINT SEALANTS

2.6.1 Joint Sealant, Cold-Applied

Joint sealant, cold-applied shall conform to ASTM C 920.

2.6.2 Joint Sealant, Hot-Poured

Joint sealant, hot-poured shall conform to ASTM D 3405.

2.7 FORM WORK

Form work shall be designed and constructed to ensure that the finished concrete will conform accurately to the indicated dimensions, lines, and elevations, and within the tolerances specified. Forms shall be of wood or steel, straight, of sufficient strength to resist springing during depositing and consolidating concrete. Wood forms shall be surfaced plank, 2 inches nominal thickness, straight and free from warp, twist, loose knots, splits or other defects. Wood forms shall have a nominal length of 10 feet. Radius bends may be formed with 3/4 inch boards, laminated to the required thickness. Steel forms shall be channel-formed sections with a flat top surface and with welded braces at each end and at not less than two intermediate points. Ends of steel forms shall be interlocking and self-aligning. Steel forms shall include flexible forms for radius forming, corner forms, form spreaders, and fillers. Steel forms shall have a nominal length of 10 feet with a minimum of 3 welded stake pockets per form. Stake pins shall be solid steel rods with chamfered heads and pointed tips designed for use with steel forms.

2.7.1 Sidewalk Forms

Sidewalk forms shall be of a height equal to the full depth of the finished sidewalk.

2.7.2 Curb and Gutter Forms

Curb and gutter outside forms shall have a height equal to the full depth of the curb or gutter. The inside form of curb shall have batter as indicated and shall be securely fastened to and supported by the outside form. Rigid forms shall be provided for curb returns, except that benders or thin plank forms may be used for curb or curb returns with a radius of 10 feet or more, where grade changes occur in the return, or where the central angle is such that a rigid form with a central angle of 90 degrees cannot be used. Back forms for curb returns may be made of 1-1/2 inch benders, for the full height of the curb, cleated together. In lieu of inside forms for curbs, a curb "mule" may be used for forming and finishing this surface, provided the results are approved.

PART 3 EXECUTION

3.1 SUBGRADE PREPARATION

The subgrade shall be constructed to the specified grade and cross section prior to concrete placement. Subgrade shall be placed and compacted in conformance with Section 2300A.

3.1.1 Sidewalk Subgrade

The subgrade shall be tested for grade and cross section with a template extending the full width of the sidewalk and supported between side forms.

3.1.2 Curb and Gutter Subgrade

The subgrade shall be tested for grade and cross section by means of a template extending the full width of the curb and gutter. The subgrade shall be of materials equal in bearing quality to the subgrade under the adjacent pavement.

3.1.3 Maintenance of Subgrade

The subgrade shall be maintained in a smooth, compacted condition in conformity with the required section and established grade until the concrete is placed. The subgrade shall be in a moist condition when concrete is placed. The subgrade shall be prepared and protected to produce a subgrade free from frost when the concrete is deposited.

3.2 FORM SETTING

Forms shall be set to the indicated alignment, grade and dimensions. Forms shall be held rigidly in place by a minimum of 3 stakes per form placed at intervals not to exceed 4 feet. Corners, deep sections, and radius bends shall have additional stakes and braces, as required. Clamps, spreaders, and braces shall be used where required to ensure rigidity in the forms. Forms shall be removed without injuring the concrete. Bars or heavy tools shall not be used against the concrete in removing the forms. Any concrete found defective after form removal shall be promptly and satisfactorily repaired. Forms shall be cleaned and coated with form oil each time before concrete is placed. Wood forms may, instead, be thoroughly wetted with water before concrete is placed, except that with probable freezing temperatures, oiling is mandatory.

3.2.1 Sidewalks

Forms for sidewalks shall be set with the upper edge true to line and grade with an allowable tolerance of 1/8 inch in any 10 foot long section. After forms are set, grade and alignment shall be checked with a 10 foot straightedge. Forms shall have a transverse slope of 1/4 inch per foot with the low side adjacent to the roadway. Side forms shall not be removed for 12 hours after finishing has been completed.

3.2.2 Curbs and Gutters

The forms of the front of the curb shall be removed not less than 2 hours nor more than 6 hours after the concrete has been placed. Forms back of curb shall remain in place until the face and top of the curb have been finished, as specified for concrete finishing. Gutter forms shall not be removed while the concrete is sufficiently plastic to slump in any direction.

3.3 SIDEWALK CONCRETE PLACEMENT AND FINISHING

3.3.1 Formed Sidewalks

Concrete shall be placed in the forms in one layer. When consolidated and finished, the sidewalks shall be of the thickness indicated. After concrete has been placed in the forms, a strike-off guided by side forms shall be used to bring the surface to proper section to be compacted. The concrete shall be consolidated with an approved vibrator, and the surface shall be finished to grade with a strike off.

3.3.2 Concrete Finishing

After straightedging, when most of the water sheen has disappeared, and just before the concrete hardens, the surface shall be finished with a wood float or darby to a smooth and uniformly fine granular or sandy texture free of waves, irregularities, or tool marks. A scored surface shall be produced by brooming with a fiber-bristle brush in a direction transverse to that of the traffic, followed by edging.

3.3.3 Edge and Joint Finishing

All slab edges, including those at formed joints, shall be finished with an edger having a radius of 1/8 inch. Transverse joint shall be edged before brooming, and the brooming shall eliminate the flat surface left by the surface face of the edger. Corners and edges which have crumbled and areas which lack sufficient mortar for proper finishing shall be cleaned and filled solidly with a properly proportioned mortar mixture and then finished.

3.3.4 Surface and Thickness Tolerances

Finished surfaces shall not vary more than 5/16 inch from the testing edge of a 10-foot straightedge. Permissible deficiency in section thickness will be up to 1/4 inch.

3.4 CURB AND GUTTER CONCRETE PLACEMENT AND FINISHING

3.4.1 Formed Curb and Gutter

Concrete shall be placed to the section required in a single lift. Consolidation shall be achieved by using approved mechanical vibrators. Curve shaped gutters shall be finished with a standard curb "mule".

3.4.2 Curb and Gutter Finishing

Approved slipformed curb and gutter machines may be used in lieu of hand placement.

3.4.3 Concrete Finishing

Exposed surfaces shall be floated and finished with a smooth wood float until true to grade and section and uniform in texture. Floated surfaces shall then be brushed with a fine-hair brush with longitudinal strokes. The edges of the gutter and top of the curb shall be rounded with an edging tool to a radius of 1/2 inch. Immediately after removing the front curb form, the face of the curb shall be rubbed with a wood or concrete rubbing block and water until blemishes, form marks, and tool marks have been removed. The front curb surface, while

still wet, shall be brushed in the same manner as the gutter and curb top. The top surface of gutter and entrance shall be finished to grade with a wood float.

3.4.4 Joint Finishing

Curb edges at formed joints shall be finished as indicated.

3.4.5 Surface and Thickness Tolerances

Finished surfaces shall not vary more than 1/4 inch from the testing edge of a 10-foot straightedge. Permissible deficiency in section thickness will be up to 1/4 inch.

3.5 SIDEWALK JOINTS

Sidewalk joints shall be constructed to divide the surface into rectangular areas. Transverse contraction joints shall be spaced at a distance equal to the sidewalk width or 5 feet on centers, whichever is less, and shall be continuous across the slab. Longitudinal contraction joints shall be constructed along the centerline of all sidewalks 10 feet or more in width. Transverse expansion joints shall be installed at sidewalk returns and opposite expansion joints in adjoining curbs. Where the sidewalk is not in contact with the curb, transverse expansion joints shall be installed as indicated. Expansion joints shall be formed about structures and features which project through or into the sidewalk pavement, using joint filler of the type, thickness, and width indicated.

3.5.1 Sidewalk Contraction Joints

The contraction joints shall be formed in the fresh concrete by cutting a groove in the top portion of the slab to a depth of at least one-fourth of the sidewalk slab thickness, using a jointer to cut the groove, or by sawing a groove in the hardened concrete with a power-driven saw, unless otherwise approved. Sawed joints shall be constructed by sawing a groove in the concrete with a 1/8 inch blade to the depth indicated. An ample supply of saw blades shall be available on the job before concrete placement is started, and at least one standby sawing unit in good working order shall be available at the jobsite at all times during the sawing operations.

3.5.2 Sidewalk Expansion Joints

Expansion joints shall be formed with 3/8 inch joint filler strips. Joint filler shall be placed with top edge 1/4 inch below the surface and shall be held in place with steel pins or other devices to prevent warping of the filler during floating and finishing. Immediately after finishing operations are completed, joint edges shall be rounded with an edging tool having a radius of 1/8 inch, and concrete over the joint filler shall be removed. At the end of the curing period, expansion joints shall be cleaned and filled with joint sealant. The joint opening shall be thoroughly cleaned before the sealing material is placed. Sealing material shall not be spilled on exposed surfaces of the concrete. Concrete at the joint shall be surface dry and atmospheric and concrete temperatures shall be above 50 degrees F at the time of application of joint sealing material. Excess material on exposed surfaces of the concrete shall be removed immediately and concrete surfaces cleaned.

3.5.3 Reinforcement Steel Placement

Reinforcement steel shall be accurately and securely fastened in place with suitable supports and ties before the concrete is placed.

3.6 CURB AND GUTTER JOINTS

Curb and gutter joints shall be constructed at right angles to the line of curb and gutter.

3.6.1 Contraction Joints

Contraction joints shall be constructed directly opposite contraction joints in abutting portland cement concrete pavements and spaced so that monolithic sections between curb returns will not be less than 5 feet nor greater than 15 feet in length. Contraction joints shall be constructed by means of 1/8 inch thick separators and of a section conforming to the cross section of the curb and gutter. Separators shall be removed as soon as practicable after concrete has set sufficiently to preserve the width and shape of the joint and prior to finishing.

3.6.2 Expansion Joints

Expansion joints shall be formed by means of preformed expansion joint filler material cut and shaped to the cross section of curb and gutter. Expansion joints shall be provided in curb and gutter directly opposite expansion joints of abutting portland cement concrete pavement, and shall be of the same type and thickness as joints in the pavement. Where curb and gutter do not abut portland cement concrete pavement, expansion joints at least 3/8 inch in width shall be provided at intervals not exceeding 50 feet. Expansion joints shall be provided in nonreinforced concrete gutter at locations indicated. Expansion joints shall be sealed immediately following curing of the concrete or as soon thereafter as weather conditions permit. Expansion joints and the top 1 inch depth of curb and gutter contraction-joints shall be sealed with joint sealant. The joint opening shall be thoroughly cleaned before the sealing material is placed. Sealing material shall not be spilled on exposed surfaces of the concrete. Concrete at the joint shall be surface dry and atmospheric and concrete temperatures shall be above 50 degrees F at the time of application of joint sealing material. Excess material on exposed surfaces of the concrete shall be removed immediately and concrete surfaces cleaned.

3.7 CURING AND PROTECTION

3.7.1 General Requirements

Concrete shall be protected against loss of moisture and rapid temperature changes for at least 7 days from the beginning of the curing operation. Unhardened concrete shall be protected from rain and flowing water. All equipment needed for adequate curing and protection of the concrete shall be on hand and ready for use before actual concrete placement begins. Protection shall be provided as necessary to prevent cracking of the pavement due to temperature changes during the curing period.

3.7.1.1 Mat Method

The entire exposed surface shall be covered with 2 or more layers of burlap. Mats shall overlap each other at least 6 inches. The mat shall be thoroughly wetted with water prior to placing on concrete surface and shall be kept continuously in a saturated condition and in intimate contact with concrete for not less than 7 days.

3.7.1.2 Impervious Sheeting Method

The entire exposed surface shall be wetted with a fine spray of water and then covered with impervious sheeting material. Sheets shall be laid directly on the concrete surface with the light-colored side up and overlapped 12 inches when a continuous sheet is not used. The curing medium shall not be less than 18-inches wider than the concrete surface to be cured, and shall be securely weighted down by heavy wood planks, or a bank of moist earth placed along edges and laps in the sheets. Sheets shall be satisfactorily repaired or replaced if torn or otherwise damaged during curing. The curing medium shall remain on the concrete surface to be cured for not less than 7 days.

3.7.1.3 Membrane Curing Method

A uniform coating of white-pigmented membrane-curing compound shall be applied to the entire exposed surface of the concrete as soon after finishing as the free water has disappeared from the finished surface. Formed surfaces shall be coated immediately after the forms are removed and in no case longer than 1 hour after the removal of forms. Concrete shall not be allowed to dry before the application of the membrane. If any drying has occurred, the surface of the concrete shall be moistened with a fine spray of water and the curing compound applied as soon as the free water disappears. Curing compound shall be applied in two coats by hand-operated pressure sprayers at a coverage of approximately 200 square feet per gallon for the total of both coats. The second coat shall be applied in a direction approximately at right angles to the direction of application of the first coat. The compound shall form a uniform, continuous, coherent film that will not check, crack, or peel and shall be free from pinholes or other imperfections. If pinholes, abrasion, or other discontinuities exist, an additional coat shall be applied to the affected areas within 30 minutes. Concrete surfaces that are subjected to heavy rainfall within 3 hours after the curing compound has been applied shall be resprayed by the method and at the coverage specified above. Areas where the curing compound is damaged by subsequent construction operations within the curing period shall be resprayed. Necessary precautions shall be taken to insure that the concrete is properly cured at sawed joints, and that no curing compound enters the joints. The top of the joint opening and the joint groove at exposed edges shall be tightly sealed before the concrete in the region of the joint is resprayed with curing compound.

The method used for sealing the joint groove shall prevent loss of moisture from the joint during the entire specified curing period. Approved standby facilities for curing concrete pavement shall be provided at a location accessible to the jobsite for use in the event of mechanical failure of the spraying equipment or other conditions that might prevent correct application of the membrane-curing compound at the proper time. Concrete surfaces to which membrane-curing compounds have been applied shall be adequately protected during the entire curing period from pedestrian and vehicular traffic, except as required for joint-sawing operations and surface tests, and from any other possible damage to the continuity of the membrane.

3.7.2 Backfilling

After curing, debris shall be removed and the area adjoining the concrete shall be backfilled, graded, and compacted to conform to the surrounding area in accordance with lines and grades indicated.

3.7.3 Protection

Completed concrete shall be protected from damage until accepted. The Contractor shall repair damaged concrete and clean concrete discolored during construction. Concrete that is damaged shall be removed and reconstructed for the entire length between regularly scheduled joints. Refinishing the damaged portion will not be acceptable. Removed damaged portions shall be disposed of as directed.

3.7.4 Protective Coating

Protective coating of linseed oil mixture shall be applied to the exposed-to-view concrete surface.

3.7.4.1 Application

Curing and backfilling operation shall be completed prior to applying two coats of protective coating. Concrete shall be surface dry and clean before each application. Coverage shall be by spray application at not more than 50 square yards per gallon for first application and not more than 70 square yards per gallon for second application, except that the number of applications and

coverage for each application for commercially prepared mixture shall be in accordance with the manufacturer's instructions. Coated surfaces shall be protected from vehicular and pedestrian traffic until dry.

3.7.4.2 Precautions

Protective coating shall not be heated by direct application of flame or electrical heaters and shall be protected from exposure to open flame, sparks, and fire adjacent to open containers or applicators. Material shall not be applied at ambient or material temperatures lower than 50 degrees F.

3.8 FIELD QUALITY CONTROL

3.8.1 General Requirements

The Contractor shall perform the inspection and tests described and meet the specified requirements for inspection details and frequency of testing. Based upon the results of these inspections and tests, the Contractor shall take the action and submit reports as required below, and any additional tests to insure that the requirements of these specifications are met.

3.8.2 Concrete Testing

3.8.2.1 Strength Testing

The Contractor shall provide molded concrete specimens for strength tests. Samples of concrete placed each day shall be taken not less than once a day nor less than once for every 250 cubic yards of concrete. The samples for strength tests shall be taken in accordance with ASTM C 172. Cylinders for acceptance shall be molded in conformance with ASTM C 31/C 31M by an approved testing laboratory. Each strength test result shall be the average of 2 test cylinders from the same concrete sample tested at 28 days, unless otherwise specified or approved. Concrete specified on the basis of compressive strength will be considered satisfactory if the averages of all sets of three consecutive strength test results equal or exceed the specified strength, and no individual strength test result falls below the specified strength by more than 500 psi.

3.8.2.2 Air Content

Air content shall be determined in accordance with ASTM C 173 or ASTM C 231. ASTM C 231 shall be used with concretes and mortars made with relatively dense natural aggregates. Two tests for air content shall be made on randomly selected batches of each class of concrete placed during each shift. Additional tests shall be made when excessive variation in concrete workability is reported by the placing foreman or the Government inspector. If results are out of tolerance, the placing foreman shall be notified and he shall take appropriate action to have the air content corrected at the plant. Additional tests for air content will be performed on each truckload of material until such time as the air content is within the tolerance specified.

3.8.2.3 Slump Test

Two slump tests shall be made on randomly selected batches of each class of concrete for every 250 cubic yards, or fraction thereof, of concrete placed during each shift. Additional tests shall be performed when excessive variation in the workability of the concrete is noted or when excessive crumbling or slumping is noted along the edges of slip-formed concrete.

3.8.3 Thickness Evaluation

The anticipated thickness of the concrete shall be determined prior to placement by passing a template through the formed section or by measuring the depth of opening of the extrusion template of the curb forming machine. If a slip form

paver is used for sidewalk placement, the subgrade shall be true to grade prior to concrete placement and the thickness will be determined by measuring each edge of the completed slab.

3.8.4 Surface Evaluation

The finished surface of each category of the completed work shall be uniform in color and free of blemishes and form or tool marks.

3.9 SURFACE DEFICIENCIES AND CORRECTIONS

3.9.1 Thickness Deficiency

When measurements indicate that the completed concrete section is deficient in thickness by more than 1/4 inch the deficient section will be removed, between regularly scheduled joints, and replaced.

3.9.2 High Areas

In areas not meeting surface smoothness and plan grade requirements, high areas shall be reduced either by rubbing the freshly finished concrete with carborundum brick and water when the concrete is less than 36 hours old or by grinding the hardened concrete with an approved surface grinding machine after the concrete is 36 hours old or more. The area corrected by grinding the surface of the hardened concrete shall not exceed 5 percent of the area of any integral slab, and the depth of grinding shall not exceed 1/4 inch. Pavement areas requiring grade or surface smoothness corrections in excess of the limits specified above shall be removed and replaced.

3.9.3 Appearance

Exposed surfaces of the finished work will be inspected by the Government and any deficiencies in appearance will be identified. Areas which exhibit excessive cracking, discoloration, form marks, or tool marks or which are otherwise inconsistent with the overall appearances of the work shall be removed and replaced.

-- End of Section --

SECTION 02921A

SEEDING
11/02

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. DEPARTMENT OF AGRICULTURE (USDA)

AMS-01 (1995) Federal Seed Act Regulations Part 201

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Quantity Check; G, RE.

Bag count or bulk weight measurements of material used compared with area covered to determine the application rate and quantity installed.

Seed Establishment Period; G, RE.

Calendar time period for the seed establishment period. When there is more than one seed establishment period, the boundaries of the seeded area covered for each period shall be described.

Maintenance Record; G, RE.

Maintenance work performed, area repaired or reinstalled, diagnosis for unsatisfactory stand of grass plants.

SD-07 Certificates

Seed; G, RE.

Fertilizer; G, RE.

Mulch; G, RE.

Prior to the delivery of materials, certificates of compliance attesting that materials meet the specified requirements. Certified copies of the material certificates shall include the following:

a. Seed. Classification, botanical name, common name, percent pure live seed, minimum percent germination and hard seed, maximum percent weed seed content, and date tested.

d. Fertilizer. Chemical analysis and composition percent.

g. Mulch: Composition and source.

1.3 DELIVERY, INSPECTION, STORAGE, AND HANDLING

1.3.1 Delivery

A delivery schedule shall be provided at least 10 calendar days prior to the first day of delivery.

1.3.2 Inspection

Seed shall be inspected upon arrival at the job site for conformity to species and quality. Seed that is wet, moldy, or bears a test date five months or older, shall be rejected. Other materials shall be inspected for compliance with specified requirements. The following shall be rejected: open soil amendment containers or wet soil amendments. Unacceptable materials shall be removed from the job site.

1.3.3 Storage

Materials shall be stored in designated areas. Seed and fertilizer shall be stored in cool, dry locations away from contaminants.

1.3.4 Handling

Materials shall not be dropped or dumped from vehicles.

PART 2 PRODUCTS

2.1 SEED

2.1.1 Seed Classification

State-certified seed of the latest season's crop shall be provided in original sealed packages bearing the producer's guaranteed analysis for percentages of mixture, purity, germination, hard seed, weed seed content, and inert material. Labels shall be in conformance with AMS-01 and applicable state seed laws.

2.1.2 Permanent Seed Species and Mixtures

Permanent seed species and mixtures shall be proportioned by weight as follows:

Common Name	Percent Pure Live Seed
FESCO 31	98%

2.1.3 Temporary Seed Species

Temporary seed species for surface erosion control or overseeding shall be as follows:

Common Name	Percent Pure Live Seed
RYE	88%

2.1.4 Quality

Weed seed shall be a maximum 1 percent by weight of the total mixture.

2.1.5 Seed Mixing

The mixing of seed may be done on site as directed.

2.1.6 Substitutions

Substitutions will not be allowed without written request and approval from the Contracting Officer.

2.2 SOIL AMENDMENTS

Soil amendments shall consist of pH adjuster, fertilizer, organic material and soil conditioners meeting the following requirements. Vermiculite shall not be used.

2.2.1 Fertilizer

Grass seed fertilizer: The nutrients ratio shall be 12 percent nitrogen, 12 percent phosphorus, and 12 percent potassium. Fertilizer shall be controlled release commercial grade, free flowing, uniform in composition, and consist of a nitrogen-phosphorus-potassium ratio. The fertilizer shall be derived from plastic or polymer coated pills. Fertilizer shall be balanced with the inclusion of trace minerals and micro-nutrients.

2.2.2 Super Absorbent Polymers

To improve water retention in soils, super absorbent polymers shall be sized and applied according to the manufacturer's recommendations. Polymers shall be added as a soil amendment and be cross-linked polyacrylamide, with an absorption capacity of 250-400 times its weight. Polymers shall also be added to the seed and be a starch grafted polyacrylonitrile, with graphite added as a tacky sticker. It shall have an absorption capacity of 100 plus times its weight.

2.3 MULCH

Mulch shall be free from weeds, mold, and other deleterious materials. Mulch materials shall be native to the region.

2.3.1 Straw

Straw shall be stalks from wheat, and barley furnished in air-dry condition and with a consistency for placing with commercial mulch-blowing equipment.

2.3.2 Hay

Hay shall be native hay, sudan-grass hay, broomsedge hay, or other herbaceous mowings, furnished in an air-dry condition suitable for placing with commercial mulch-blowing equipment.

2.4 WATER

Water shall be the responsibility of the Contractor, unless otherwise noted.

Water shall not contain elements toxic to plant life.

PART 3 EXECUTION

3.1 INSTALLING SEED TIME AND CONDITIONS

3.1.1 Seeding Time

Seed shall be installed from February 15th to May 15th for spring establishment; from August 15th to September 15th for fall establishment.

3.1.2 Seeding Conditions

Seeding operations shall be performed only during periods when beneficial results can be obtained. When drought, excessive moisture, or other unsatisfactory conditions prevail, the work shall be stopped when directed. When special conditions warrant a variance to the seeding operations, proposed alternate times shall be submitted for approval.

3.2 SITE PREPARATION

3.2.1 Finished Grade

The Contractor shall verify that finished grades are as indicated on drawings, and the placing of topsoil, smooth grading, and compaction requirements have been completed in accordance with Section 02300A EARTHWORK, prior to the commencement of the seeding operation.

3.2.2 Application of Soil Amendments

3.2.2.1 Applying Fertilizer

The application rate shall be per specification provided by seed suppliers.

3.2.3 Tillage

Soil on slopes up to a maximum 3-horizontal-to-1-vertical shall be tilled to a minimum 4 inch depth. On slopes between 3-horizontal-to-1-vertical and 1-horizontal-to-1 vertical, the soil shall be tilled to a minimum 2 inch depth by scarifying with heavy rakes, or other method. Rototillers shall be used where soil conditions and length of slope permit. On slopes 1-horizontal-to-1 vertical and steeper, no tillage is required. Areas compacted by construction operations shall be completely pulverized by tillage. Soil used for repair of surface erosion or grade deficiencies shall conform to topsoil requirements. The fertilizer may be applied during this procedure.

3.2.4 Prepared Surface

3.2.4.1 Preparation

The prepared surface shall be a maximum 1 inch below the adjoining grade of any surfaced area. New surfaces shall be blended to existing areas. The prepared surface shall be completed with a light raking to remove debris.

3.2.4.2 Lawn Area Debris

Debris and stones over a minimum 5/8 inch in any dimension shall be removed from the surface.

3.2.4.3 Protection

Areas with the prepared surface shall be protected from compaction or pedestrian traffic and surface erosion.

3.3 INSTALLATION

Prior to installing seed, any previously prepared surface compacted or damaged shall be reworked to meet the requirements of paragraph SITE PREPARATION. Seeding operations shall not take place when the wind velocity will prevent uniform seed distribution.

3.3.1 Installing Seed

Seeding method shall be Hydroseeding. Seeding procedure shall ensure even coverage. Gravity feed applicators, which drop seed directly from a hopper onto the prepared soil, shall not be used because of the difficulty in achieving even coverage, unless otherwise approved. Absorbent polymer powder shall be mixed with the dry seed at the rate recommended by the manufacturer.

3.3.2 Hydroseeding

Seed shall be mixed to ensure broadcast at the rate of 0.3 pounds per 1000 square feet. Seed and fertilizer shall be added to water and thoroughly mixed to meet the rates specified. The time period for the seed to be held in the slurry shall be a maximum 24 hours. Wood cellulose fiber mulch and tackifier shall be added at the rates recommended by the manufacturer after the seed, fertilizer, and water have been thoroughly mixed to produce a homogeneous slurry.

Slurry shall be uniformly applied under pressure over the entire area. The hydroseeded area shall not be rolled.

3.3.3 Mulching

3.3.3.1 Hay or Straw Mulch

Hay or straw mulch shall be spread uniformly at the rate of 2 tons per acre. Mulch shall be spread by hand, blower-type mulch spreader, or other approved method. Mulching shall be started on the windward side of relatively flat areas or on the upper part of steep slopes, and continued uniformly until the area is covered. The mulch shall not be bunched or clumped. Sunlight shall not be completely excluded from penetrating to the ground surface. All areas installed with seed shall be mulched on the same day as the seeding. Mulch shall be anchored immediately following spreading.

3.3.3.2 Mechanical Anchor

Mechanical anchor shall be a V-type-wheel land packer; a scalloped-disk land packer designed to force mulch into the soil surface; or other suitable equipment.

3.3.4 Watering Seed

Watering shall be started immediately after completing the seeding of an area. Water shall be applied to supplement rainfall at a rate sufficient to ensure moist soil conditions to a minimum 1 inch depth. Run-off and puddling shall be prevented. Watering trucks shall not be driven over turf areas, unless otherwise directed. Watering of other adjacent areas or plant material shall be prevented.

3.4 SURFACE EROSION CONTROL

3.4.1 Temporary Seeding

The application rate shall be 13.0 pounds per 1000 square yards. When directed during contract delays affecting the seeding operation or when a quick cover is required to prevent surface erosion, the areas designated shall be seeded in accordance with temporary seed species listed under Paragraph SEED.

3.5 QUANTITY CHECK

For materials provided in bags, the empty bags shall be retained for recording the amount used. For materials provided in bulk, the weight certificates shall be retained as a record of the amount used. The amount of material used shall be compared with the total area covered to determine the rate of application used. Differences between the quantity applied and the quantity specified shall be adjusted as directed.

3.6 RESTORATION AND CLEAN UP

3.6.1 Restoration

Existing turf areas, pavements, and facilities that have been damaged from the seeding operation shall be restored to original condition at Contractor's expense.

3.6.2 Clean Up

Excess and waste material shall be removed from the seeded areas and shall be disposed offsite. Adjacent paved areas shall be cleaned.

3.7 PROTECTION OF INSTALLED AREAS

Immediately upon completion of the seeding operation in an area, the area shall be protected against traffic or other use by erecting barricades and providing signage as required, or as directed.

3.8 SEED ESTABLISHMENT PERIOD

3.8.1 Commencement

The seed establishment period to obtain a healthy stand of grass plants shall begin on the first day of seeding work under this contract and shall continue through the remaining life of the contract and end 3 months after the last day of the seeding operation. Written calendar time period shall be furnished for the seed establishment period. When there is more than 1 seed establishment period, the boundaries of the seeded area covered for each period shall be described. The seed establishment period shall be modified for inclement weather, shut down periods, or for separate completion dates of areas.

3.8.2 Satisfactory Stand of Grass Plants

Grass plants shall be evaluated for species and health when the grass plants are a minimum 1 inch high.

3.8.2.1 Lawn Area

A satisfactory stand of grass plants from the seeding operation for a lawn area shall be a minimum 100 grass plants per square foot. Bare spots shall be a maximum 9 inches square. The total bare spots shall be a maximum 2 percent of the total seeded area.

3.8.3 Maintenance During Establishment Period

Maintenance of the seeded areas shall include eradicating weeds, insects and diseases; protecting embankments and ditches from surface erosion; maintaining erosion control materials and mulch; protecting installed areas from traffic; mowing; watering; and post-fertilization.

3.8.3.1 Repair or Reinstall

Unsatisfactory stand of grass plants and mulch shall be repaired or reinstalled, and eroded areas shall be repaired in accordance with paragraph SITE PREPARATION.

3.8.3.2 Maintenance Record

A record of each site visit shall be furnished, describing the maintenance work performed; areas repaired or reinstalled; and diagnosis for unsatisfactory stand of grass plants.

-- End of Section --

DIVISION 3 - CONCRETE

THRU

DIVISION 12 - FURNISHINGS

NOT APPLICABLE

DIVISION 13 - SPECIAL CONSTRUCTION

13280A	Asbestos Abatement
13281A	Lead Hazard Control Activities
13286N	Handling of Lighting Ballasts and Lamps Containing PCBs and Mercury

APPENDICES

Appendix I:	Hazardous Materials Survey
Appendix II:	Asbestos Material Survey
Appendix III:	Asbestos Bulk Sample Results
Appendix IV:	Lead-Based Paint Survey Data
Appendix V:	Inspector's Certification
Appendix VI:	Pre-Demolition Asbestos Roofing Survey
	Attachment VI-A: Asbestos Materials Inventory
	Attachment VI-B: Asbestos Bulk Sample Results
	Attachment VI-C: Inspector's Certification
Appendix VII:	Pre-Demolition PCB and Other Hazards Survey
	Attachment VII-A: Analytical Results
	Attachment VII-B: Photo Log

SECTION 13280A
ASBESTOS ABATEMENT
11/01

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2 (1979; R 1991) Fundamentals Governing the Design and Operation of Local Exhaust Systems

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 1331 (1989; R 1995) Surface and Interfacial Tension of Solutions of Surface-Active Agents

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH 84-100 (1984; Supple 1985, 1987, 1988 & 1990) NIOSH Manual of Analytical Methods

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 340/1-90/018 (1990) Asbestos/NESHAP Regulated Asbestos Containing Materials Guidance

EPA 340/1-90/019 (1990) Asbestos/NESHAP Adequately Wet Guidance

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1926 Safety and Health Regulations for Construction

40 CFR 61 National Emission Standards for Hazardous Air Pollutants

40 CFR 763 Asbestos

49 CFR 107 Hazardous Materials Program Procedures

49 CFR 171 General Information, Regulations, and Definitions

49 CFR 172 Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

49 CFR 173 Shippers - General Requirements for Shipments and Packagings

1.2 DEFINITIONS

- a. Adequately Wet: A term defined in 40 CFR 61, Subpart M, and EPA 340/1-90/019 meaning to sufficiently mix or penetrate with liquid to prevent the release of particulate. If visible emissions are observed coming from asbestos-containing material (ACM), then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wetted.
- b. Aggressive Method: Removal or disturbance of building material by sanding, abrading, grinding, or other method that breaks, crumbles, or disintegrates intact asbestos-containing material (ACM).
- c. Amended Water: Water containing a wetting agent or surfactant with a surface tension of at least 29 dynes per square centimeter when tested in accordance with ASTM D 1331.
- d. Asbestos: Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered.
- e. Asbestos-Containing Material (ACM): Any materials containing more than one percent asbestos.
- f. Asbestos Fiber: A particulate form of asbestos, 5 micrometers or longer, with a length-to-width ratio of at least 3 to 1.
- g. Authorized Person: Any person authorized by the Contractor and required by work duties to be present in the regulated areas.
- h. Building Inspector: Individual who inspects buildings for asbestos and has EPA Model Accreditation Plan (MAP) "Building Inspector" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.
- i. Certified Industrial Hygienist (CIH): An Industrial Hygienist certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.
- j. Class I Asbestos Work: Activities defined by OSHA involving the removal of thermal system insulation (TSI) and surfacing ACM.
- k. Class II Asbestos Work: Activities defined by OSHA involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos - containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastic. Certain "incidental" roofing materials such as mastic, flashing and cements when they are still intact are excluded from Class II asbestos work. Removal of small amounts of these materials which would fit into a glovebag may be classified as a Class III job.
- l. Class III Asbestos Work: Activities defined by OSHA that involve repair and maintenance operations, where ACM, including TSI and surfacing ACM, is likely to be disturbed. Operations may include drilling, abrading, cutting a hole, cable pulling, crawling through tunnels or attics and spaces above the ceiling, where asbestos is actively disturbed or asbestos-containing debris is actively disturbed.
- m. Class IV Asbestos Work: Maintenance and custodial construction activities during which employees contact but do not disturb ACM and activities to clean-up dust, waste and debris resulting from Class I,

II, and III activities. This may include dusting surfaces where ACM waste and debris and accompanying dust exists and cleaning up loose ACM debris from TSI or surfacing ACM following construction.

- n. Clean room: An uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.
- o. Competent Person: In addition to the definition in 29 CFR 1926, Section .32(f), a person who is capable of identifying existing asbestos hazards as defined in 29 CFR 1926, Section .1101, selecting the appropriate control strategy, has the authority to take prompt corrective measures to eliminate them and has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.
- p. Contractor/Supervisor: Individual who supervises asbestos abatement work and has EPA Model Accreditation Plan "Contractor/Supervisor" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.
- q. Critical Barrier: One or more layers of plastic sealed over all openings into a regulated area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a regulated area from migrating to an adjacent area.
- r. Decontamination Area: An enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.
- s. Demolition: The wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.
- t. Disposal Bag: A 6 mil thick, leak-tight plastic bag, pre-labeled in accordance with 29 CFR 1926, Section .1101, used for transporting asbestos waste from containment to disposal site.
- u. Disturbance: Activities that disrupt the matrix of ACM, crumble or pulverize ACM, or generate visible debris from ACM. Disturbance includes cutting away small amounts of ACM, no greater than the amount which can be contained in 1 standard sized glovebag or waste bag, not larger than 60 inches in length and width in order to access a building component.
- v. Equipment Room or Area: An area adjacent to the regulated area used for the decontamination of employees and their equipment.
- w. Employee Exposure: That exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.
- x. Fiber: A fibrous particulate, 5 micrometers or longer, with a length to width ratio of at least 3 to 1.
- y. Friable ACM: A term defined in 40 CFR 61, Subpart M and EPA 340/1-90/018 meaning any material which contains more than 1 percent asbestos, as determined using the method specified in 40 CFR 763, Subpart E, Appendix A, Section 1, Polarized Light Microscopy (PLM), that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent, as determined by a method other than point counting by PLM, the asbestos content is verified by point counting using PLM.
- z. Glovebag: Not more than a 60 by 60 inch impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like

appendages through which material and tools may be handled.

- aa. High-Efficiency Particulate Air (HEPA) Filter: A filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.
- bb. Homogeneous Area: An area of surfacing material or thermal system insulation that is uniform in color and texture.
- cc. Industrial Hygienist: A professional qualified by education, training, and experience to anticipate, recognize, evaluate, and develop controls for occupational health hazards.
- dd. Intact: ACM which has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix. Removal of "intact" asphaltic, resinous, cementitious products does not render the ACM non-intact simply by being separated into smaller pieces.
- ee. Model Accreditation Plan (MAP): USEPA training accreditation requirements for persons who work with asbestos as specified in 40 CFR 763, Subpart E, Appendix C.
- ff. Modification: A changed or altered procedure, material or component of a control system, which replaces a procedure, material or component of a required system.
- gg. Negative Exposure Assessment: A demonstration by the Contractor to show that employee exposure during an operation is expected to be consistently below the OSHA Permissible Exposure Limits (PELs).
- hh. NESHAP: National Emission Standards for Hazardous Air Pollutants. The USEPA NESHAP regulation for asbestos is at 40 CFR 61, Subpart M.
- ii. Nonfriable ACM: A NESHAP term defined in 40 CFR 61, Subpart M and EPA 340/1-90/018 meaning any material containing more than 1 percent asbestos, as determined using the method specified in 40 CFR 763, Subpart E, Appendix A, Section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.
- jj. Nonfriable ACM (Category I): A NESHAP term defined in 40 CFR 61, Subpart E and EPA 340/1-90/018 meaning asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in 40 CFR 763, Subpart F, Appendix A, Section 1, Polarized Light Microscopy.
- kk. Nonfriable ACM (Category II): A NESHAP term defined in 40 CFR 61, Subpart E and EPA 340/1-90/018 meaning any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos, as determined using the methods specified in 40 CFR 763, Subpart F, Appendix A, Section 1, Polarized Light Microscopy, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
- ll. Permissible Exposure Limits (PELs):
 - (1) PEL-Time weighted average(TWA): Concentration of asbestos not in excess of 0.1 fibers per cubic centimeter of air (f/cc) as an 8 hour time weighted average (TWA), as determined by the method prescribed in 29 CFR 1926, Section .1101, Appendix A, or the current version of NIOSH 84-100 analytical method 7400.

- (2) PEL-Excursion Limit: An airborne concentration of asbestos not in excess of 1.0 f/cc of air as averaged over a sampling period of 30 minutes as determined by the method prescribed in 29 CFR 1926, Section .1101, Appendix A, or the current version of NIOSH 84-100 analytical method 7400.
- mm. Regulated Area: An OSHA term defined in 29 CFR 1926, Section .1101 meaning an area established by the Contractor to demarcate areas where Class I, II, and III asbestos work is conducted; also any adjoining area where debris and waste from such asbestos work accumulate; and an area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the permissible exposure limit.
- nn. Removal: All operations where ACM is taken out or stripped from structures or substrates, and includes demolition operations.
- pp. Spills/Emergency Cleanups: Cleanup of sizable amounts of asbestos waste and debris which has occurred, for example, when water damage occurs in a building, and sizable amounts of ACM are dislodged. A Competent Person evaluates the site and ACM to be handled, and based on the type, condition and extent of the dislodged material, classifies the cleanup as Class I, II, or III. Only if the material was intact and the cleanup involves mere contact of ACM, rather than disturbance, could there be a Class IV classification.
- qq. Surfacing ACM: Asbestos-containing material which contains more than 1% asbestos and is sprayed-on, troweled-on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.
- rr. Thermal system insulation (TSI) ACM: ACM which contains more than 1% asbestos and is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain or water condensation.
- ss. Transite: A generic name for asbestos cement wallboard and pipe.
- tt. Worker: Individual (not designated as the Competent Person or a supervisor) who performs asbestos work and has completed asbestos worker training required by 29 CFR 1926, Section .1101, to include EPA Model Accreditation Plan (MAP) "Worker" training; accreditation required by 40 CFR 763, Subpart E, Appendix C, if required by the OSHA Class of work to be performed or by the state where the work is to be performed.

1.3 DESCRIPTION OF WORK

The work covered by this section includes the removal of asbestos-containing materials (ACM) and describes procedures, materials and equipment required to protect workers and occupants of the regulated area from contact with airborne asbestos fibers and ACM dust and debris. Activities include OSHA Class I, Class II, Class III, and Class IV work operations involving ACM. The work also includes containment, storage, transportation and disposal of the generated ACM wastes. More specific operational procedures shall be detailed in the required Accident Prevention Plan and its subcomponents, the Asbestos Hazard Abatement Plan and Activity Hazard Analyses required in paragraph SAFETY AND HEALTH PROGRAM AND PLANS.

1.3.1 Abatement Work Tasks

The specific ACM to be abated is identified on the detailed list of materials. Non-friable materials to be abated include: Glue on Acoustical Tile, Black Tar Pipe Wrap, Electrical Wiring, Fire Doors, Floor Tile with Mastic, built-up

roofing, and roof flashing. Friable materials to be abated include Heat Reflectors and Mag Block Pipe Insulation.

1.3.2 Unexpected Discovery of Asbestos

For any previously untested building components suspected to contain asbestos and located in areas impacted by the work, the Contractor shall notify the Contracting Officer (CO) who will have the option of ordering up to ten (10) bulk samples to be obtained at the Contractor's expense and delivered to a laboratory accredited under the National Institute of Standards and Technology (NIST) "National Voluntary Laboratory Accreditation Program (NVLAP)" and analyzed by PLM at no additional cost to the Government. Any additional components identified as ACM that have been approved by the Contracting Officer for removal shall be removed by the Contractor and will be paid for by an equitable adjustment to the contract price under the CONTRACT CLAUSE titled "changes". Sampling activities undertaken to determine the presence of additional ACM shall be conducted by personnel who have successfully completed the EPA Model Accreditation Plan (MAP) "Building Inspector" training course required by 40 CFR 763, Subpart E, Appendix C.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Respiratory Protection Program; G, AE

Records of the respirator program.

Cleanup and Disposal; G, AE

Waste shipment records. Weigh bills and delivery tickets shall be furnished for information only.

Detailed Drawings; G, AE

Descriptions, and site layout to include temporary waste storage facility, location of temporary utilities (electrical, water, sewer) and boundaries of each regulated area.

Materials and Equipment; G, AE

Manufacturer's catalog data for all materials and equipment to be used in the work, including brand name, model, capacity, performance characteristics and any other pertinent information. Material Safety Data Sheets for all chemicals to be used onsite in the same format as implemented in the Contractor's HAZARD COMMUNICATION PROGRAM. Data shall include, but shall not be limited to, the following items:

- b. Vacuum cleaning equipment
- d. Air monitoring equipment
- e. Respirators
- f. Personal protective clothing and equipment
- g. Glovebag

- h. Duct Tape
- i. Disposal Containers
- j. Sheet Plastic
- k. Wetting Agent
 - (1) Amended Water
 - (2) Removal encapsulant
- l. mastic remover
- m. Prefabricated Decontamination Unit
- n. Other items
- q. Material Safety Data Sheets (for all chemicals proposed)

Qualifications; G, AE

A written report providing evidence of qualifications for personnel, facilities and equipment assigned to the work.

Training Program; G, AE

A copy of the written project site-specific training material as indicated in 29 CFR 1926, Section.1101 that will be used to train onsite employees. The training document shall be signed by the Contractor's Designated IH and Competent Person.

Medical Requirements; G, AE

Physician's written opinion.

SD-06 Test Reports

Exposure Assessment and Air Monitoring; G, AE

Initial exposure assessments, negative exposure assessments, air-monitoring results and documentation.

Licenses, Permits and Notifications; G, AE

Licenses, permits, and notifications.

SD-07 Certificates

Vacuum, Filtration and Ventilation Equipment; G, AE

Manufacturer's certifications showing compliance with ANSI Z9.2 for:

- a. Vacuums.
- b. Water filtration equipment.
- c. Ventilation equipment.
- d. Other equipment required to contain airborne asbestos fibers.

1.5 QUALIFICATIONS

1.5.1 Written Qualifications and Organization Report

The Contractor shall furnish a written qualifications and organization report providing evidence of qualifications of the Contractor, Contractor's Project Supervisor, Designated Competent Person, supervisors and workers; Designated IH (person assigned to project and firm name); independent testing laboratory (including name of firm, principal, and analysts who will perform analyses); all subcontractors to be used including disposal transportation and disposal facility firms, subcontractor supervisors, subcontractor workers; and any others assigned to perform asbestos abatement and support activities. The report shall include an organization chart showing the Contractor's staff organization for this project by name and title, chain of command and reporting relationship with all subcontractors. The report shall be signed by the Contractor, the Contractor's onsite project manager, Designated Competent Person, Designated IH, designated testing laboratory and the principals of all subcontractors to be used. The Contractor shall include the following statement in the report: "By signing this report I certify that the personnel I am responsible for during the course of this project fully understand the contents of 29 CFR 1926, Section .1101, 40 CFR 61, Subpart M, and the federal, state and local requirements specified in paragraph SAFETY AND HEALTH PROGRAM AND PLANS for those asbestos abatement activities that they will be involved in."

1.5.2 Specific Requirements

The Contractor shall designate in writing, personnel meeting the following qualifications:

- a. Designated Competent Person: The name, address, telephone number, and resume of the Contractor's Designated Competent Person shall be provided. Evidence that the full-time Designated Competent Person is qualified in accordance with 29 CFR 1926, Sections .32 and .1101, has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C, and is experienced in the administration and supervision of asbestos abatement projects. The Designated Competent Person shall be responsible for compliance with applicable federal, state and local requirements, the Contractor's Accident Prevention Plan and Asbestos Hazard Abatement Plan. The Designated Competent Person shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph. The Contractor shall submit evidence that this person has a minimum of 2 years of on-the-job asbestos abatement experience relevant to OSHA competent person requirements. The Designated Competent Person shall be onsite at all times during the conduct of this project.
- b. Project and Other Supervisors: The Contractor shall provide the name, address, telephone number, and resume of the Project Supervisor and other supervisors who have responsibility to implement the Accident Prevention Plan, including the Asbestos Hazard Abatement Plan and Activity Hazard Analyses, the authority to direct work performed under this contract and verify compliance, and have EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C. The Project Supervisor and other supervisors shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph. The Contractor shall submit evidence that the Project Supervisor has a minimum of 2 years of on-the-job asbestos abatement experience relevant to project supervisor responsibilities and the other supervisors have a minimum of 1 year of on-the-job asbestos abatement experience commensurate with the responsibilities they will have on this project.

- c. **Designated Industrial Hygienist:** The Contractor shall provide the name, address, telephone number, resume and other information specified below for the Industrial Hygienist (IH) selected to prepare the Contractor's Asbestos Hazard Abatement Plan, prepare and perform training, direct air monitoring and assist the Contractor's Competent Person in implementing and ensuring that safety and health requirements are complied with during the performance of all required work. The Designated IH shall be a person who is board certified in the practice of industrial hygiene as determined and documented by the American Board of Industrial Hygiene (ABIH), has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C, and has a minimum of 2 years of comprehensive experience in planning and overseeing asbestos abatement activities. The Designated IH shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph. The Designated IH shall be completely independent from the Contractor according to federal, state, or local regulations; that is, shall not be a Contractor's employee or be an employee or principal of a firm in a business relationship with the Contractor negating such independent status. A copy of the Designated IH's current valid ABIH certification from the ABIH shall be included. The Designated IH shall visit the site at least once per week for the duration of asbestos activities and shall be available for emergencies. In addition, the Designated IH shall prepare, and the Contractor shall submit, the name, address, telephone numbers and resumes of additional IH's and industrial hygiene technicians (IHT) who will be assisting the Designated IH in performing onsite tasks. IHs and IHTs supporting the Designated IH shall have a minimum of 2 years of practical onsite asbestos abatement experience. The formal reporting relationship between the Designated IH and the support IHs and IHTs, the Designated Competent Person, and the Contractor shall be indicated.
- d. **Asbestos Abatement Workers:** Asbestos abatement workers shall meet the requirements contained in 29 CFR 1926, Section .1101, 40 CFR 61, Subpart M, and other applicable federal, state and local requirements. Worker training documentation shall be provided as required on the "Certificate of Workers Acknowledgment" in this paragraph.
- e. **Worker Training and Certification of Worker Acknowledgment:** Training documentation will be required for each employee who will perform OSHA Class I, Class II, Class III, or Class IV asbestos abatement operations. Such documentation shall be submitted on a Contractor generated form titled "Certificate of Workers Acknowledgment", to be completed for each employee in the same format and containing the same information as the example certificate at the end of this section. Training course completion certificates (initial and most recent update refresher) required by the information checked on the form shall be attached.
- f. **Physician:** The Contractor shall provide the name, medical qualifications, address, telephone number and resume of the physician who will or has performed the medical examinations and evaluations of the persons who will conduct the asbestos abatement work tasks. The physician shall be currently licensed by the state where the workers will be or have been examined, have expertise in pneumoconiosis and shall be responsible for the determination of medical surveillance protocols and for review of examination/test results performed in compliance with 29 CFR 1926, Section .1101 and paragraph MEDICAL REQUIREMENTS. The physician shall be familiar with the site's hazards and the scope of this project.
- g. **First Aid and CPR Trained Persons:** The names of at least 2 persons who

are currently trained in first aid and CPR by the American Red Cross or other approved agency shall be designated and shall be onsite at all times during site operations. They shall be trained in universal precautions and the use of PPE as described in the Bloodborne Pathogens Standard of 29 CFR 1910, Section .1030 and shall be included in the Contractor's Bloodborne Pathogen Program. These persons may perform other duties but shall be immediately available to render first aid when needed. A copy of each designated person's current valid First Aid and CPR certificate shall be provided.

- h. Independent Testing Laboratory: The Contractor shall provide the name, address and telephone number of the independent testing laboratory selected to perform the sample analyses and report the results. The testing laboratory shall be completely independent from the Contractor as recognized by federal, state or local regulations. The laboratory must be accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) for asbestos bulk sample analysis and by the American Industrial Hygiene Association (AIHA).
- i. Disposal Facility, Transporter: The Contractor shall provide written evidence that the landfill to be used is approved for asbestos disposal by the state and local regulatory agencies. Copies of signed agreements between the Contractor (including subcontractors and transporters) and the asbestos waste disposal facility to accept and dispose of all asbestos containing waste generated during the performance of this contract shall be provided. Qualifications shall be provided for each subcontractor or transporter to be used, indicating previous experience in transport and disposal of asbestos waste to include all required state and local waste hauler requirements for asbestos. The Contractor and transporters shall meet the DOT requirements of 49 CFR 171, 49 CFR 172, and 49 CFR 173 as well as registration requirements of 49 CFR 107 and other applicable state or local requirements. The disposal facility shall meet the requirements of 40 CFR 61, Sections .154 or .155, as required in 40 CFR 61, Section .150(b), and other applicable state or local requirements.

1.6 REGULATORY REQUIREMENTS

In addition to detailed requirements of this specification, work performed under this contract shall comply with EM 385-1-1, applicable federal, state, and local laws, ordinances, criteria, rules and regulations regarding handling, storing, transporting, and disposing of asbestos waste materials. This includes, but is not limited to, OSHA standards, 29 CFR 1926, especially Section .1101, 40 CFR 61, Subpart M, 40 CFR 763 and Department of Transportation (DOT) requirements of 49 CFR 171, 49 CFR 172, and 49 CFR 173 as well as registration requirements of 49 CFR 107.

1.7 SAFETY AND HEALTH PROGRAM AND PLANS

The Contractor shall develop and submit a written comprehensive site-specific Accident Prevention Plan at least 30 days prior to the preconstruction conference. The Accident Prevention Plan shall address requirements of EM 385-1-1, Appendix A, covering onsite work to be performed by the Contractor and subcontractors. The Accident Prevention Plan shall incorporate an Asbestos Hazard Abatement Plan, and Activity Hazard Analyses as separate appendices into 1 site specific Accident Prevention Plan document. Any portions of the Contractor's overall Safety and Health Program that are referenced in the Accident Prevention Plan, e.g., respirator program, hazard communication program, confined space entry program, etc., shall be included as appendices to the Accident Prevention Plan. The plan shall take into consideration all the individual asbestos abatement work tasks. The plan shall be prepared, signed (and sealed, including certification number if required), and dated by the Contractor's Designated IH, Competent Person, and Project Supervisor.

1.7.1 Asbestos Hazard Abatement Plan Appendix

The Asbestos Hazard Abatement Plan appendix to the Accident Prevention Plan shall include, but not be limited to, the following:

- a. The personal protective equipment to be used;
- b. The location and description of regulated areas;
- c. Initial exposure assessment in accordance with 29 CFR 1926, Section .1101;
- d. Level of supervision;
- e. Method of notification of other employers at the worksite;
- f. Abatement method to include containment and control procedures;
- g. Interface of trades involved in the construction;
- h. Sequencing of asbestos related work;
- i. Storage and disposal procedures and plan;
- j. Type of wetting agent and asbestos encapsulant to be used;
- l. Air monitoring methods (personal, environmental and clearance);
- m. Bulk sampling and analytical methods (if required);
- n. A detailed description of the method to be employed in order to control the spread of ACM wastes and airborne fiber concentrations;
- o. Fire and medical emergency response procedures;
- p. The security procedures to be used for all regulated areas.

1.7.2 Activity Hazard Analyses Appendix

Activity Hazard Analyses, for each major phase of work, shall be submitted and updated during the project. The Activity Hazard Analyses format shall be in accordance with EM 385-1-1 (Figure 1-1). The analysis shall define the activities to be performed for a major phase of work, identify the sequence of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level. Work shall not proceed on that phase until the Activity Hazard Analyses has been accepted and a preparatory meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activities, including the onsite Government representatives. The Activity Hazard Analyses shall be continuously reviewed and, when appropriate, modified to address changing site conditions or operations.

1.8 PRECONSTRUCTION CONFERENCE AND ONSITE SAFETY

The Contractor and the Contractor's Designated Competent Person, Project Supervisor, and Designated IH shall meet with the Contracting Officer prior to beginning work at a safety preconstruction conference to discuss the details of the Contractor's submitted Accident Prevention Plan to include the Asbestos Hazard Abatement Plan and Activity Hazard Analyses appendices. Deficiencies in the Accident Prevention Plan will be discussed and the Accident Prevention Plan shall be revised to correct the deficiencies and resubmitted for acceptance. Any changes required in the specification as a result of the Accident Prevention Plan shall be identified specifically in the plan to allow for free discussion and

acceptance by the Contracting Officer, prior to the start of work. Onsite work shall not begin until the Accident Prevention Plan has been accepted. A copy of the written Accident Prevention Plan shall be maintained onsite. Changes and modifications to the accepted Accident Prevention Plan shall be made with the knowledge and concurrence of the Designated IH, the Project Supervisor, Designated Competent Person, and the Contracting Officer. Should any unforeseen hazard become evident during the performance of the work, the Designated IH shall bring such hazard to the attention of the Project Supervisor, Designated Competent Person, and the Contracting Officer, both verbally and in writing, for resolution as soon as possible. In the interim, all necessary action shall be taken by the Contractor to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment. Once accepted by the Contracting Officer, the Accident Prevention Plan, including the Asbestos Hazard Abatement Plan and Activity Hazard Analyses will be enforced as if an addition to the contract. Disregarding the provisions of this contract or the accepted Accident Prevention Plan will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

1.9 SECURITY

Signage as required by regulations and these specifications shall be provided for each regulated area. A log book shall be kept documenting entry into and out of the regulated area. Entry into regulated areas shall only be by personnel authorized by the Contractor and the Contracting Officer. Personnel authorized to enter regulated areas shall be trained, be medically evaluated, and wear the required personal protective equipment for the specific regulated area to be entered.

1.10 MEDICAL REQUIREMENTS

Medical requirements shall conform to 29 CFR 1926, Section .1101.

1.10.1 Medical Examinations

Before being exposed to airborne asbestos fibers, workers shall be provided with a medical examination as required by 29 CFR 1926, Section .1101 and other pertinent state or local requirements. This requirement shall have been satisfied within the last 12 months. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos and within 30 calendar days before or after the termination of employment in such occupation. X-ray films of asbestos workers shall be identified to the consulting radiologist and medical record jackets shall be marked with the word "asbestos."

1.10.1.1 Information Provided to the Physician

The Contractor shall provide the following information in writing to the examining physician:

- a. A copy of 29 CFR 1926, Section .1101 and Appendices D, E, G, and I;
- b. A description of the affected employee's duties as they relate to the employee's exposure;
- c. The employee's representative exposure level or anticipated exposure level;
- d. A description of any personal protective and respiratory equipment used or to be used;
- e. Information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

1.10.1.2 Written Medical Opinion

For each worker, a written medical opinion prepared and signed by a licensed physician indicating the following:

- a. Summary of the results of the examination.
- b. The potential for an existing physiological condition that would place the employee at an increased risk of health impairment from exposure to asbestos.
- c. The ability of the individual to wear personal protective equipment, including respirators, while performing strenuous work tasks under cold and/or heat stress conditions.
- d. A statement that the employee has been informed of the results of the examination, provided with a copy of the results, informed of the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure, and informed of any medical condition that may result from asbestos exposure.

1.10.2 Medical and Exposure Records

Complete and accurate records shall be maintained of each employee's medical examinations, medical records, and exposure data, as required by 29 CFR 1910, Section .1910.20 and 29 CFR 1926, Section .1101 for a period of 30 years after termination of employment. Records of the required medical examinations and exposure data shall be made available, for inspection and copying, to the Assistant Secretary of Labor for Occupational Safety and Health (OSHA) or authorized representatives of the employee and an employee's physician upon request of the employee or former employee. A copy of the required medical certification for each employee shall be maintained on file at the worksite for review, as requested by the Contracting Officer or the representatives.

1.11 TRAINING PROGRAM

1.11.1 General Training Requirements

The Contractor shall establish a training program as specified by EPA Model Accreditation Plan (MAP), training requirements at 40 CFR 763, Subpart E, Appendix C, the State of Kansas regulation no. 28-50, OSHA requirements at 29 CFR 1926, Section.1101(k)(9), and this specification. Contractor employees shall complete the required training for the type of work they are to perform and such training shall be documented and provided to the Contracting Officer as specified in paragraph QUALIFICATIONS.

1.11.2 Project Specific Training

Prior to commencement of work, each worker shall be instructed by the Contractor's Designated IH and Competent Person in the following project specific training:

- a. The hazards and health effects of the specific types of ACM to be abated;
- b. The content and requirements of the Contractor's Accident Prevention Plan to include the Asbestos Hazard Abatement Plan and Activity Hazard Analyses and site-specific safety and health precautions;
- c. Hazard Communication Program;
- d. Hands-on training for each asbestos abatement technique to be employed;
- e. Heat and/or cold stress monitoring specific to this project;

- f. Air monitoring program and procedures;
- g. Medical surveillance to include medical and exposure record-keeping procedures;
- h. The association of cigarette smoke and asbestos-related disease;
- i. Security procedures;
- j. Specific work practice controls and engineering controls required for each Class of work in accordance with 29 CFR 1926, Section .1101.

1.12 RESPIRATORY PROTECTION PROGRAM

The Contractor shall establish in writing, and implement a respiratory protection program in accordance with 29 CFR 1926, Section .1101, 29 CFR 1910, Section .134, ANSI Z88.2, CGA G-7, CGA G-7.1 . The Contractor shall establish minimum respiratory protection requirements based on measured or anticipated levels of airborne asbestos fiber concentrations encountered during the performance of the asbestos abatement work. The Contractor's respiratory protection program shall include, but not be limited to, the following elements:

- a. The company policy, used for the assignment of individual responsibility, accountability, and implementation of the respiratory protection program.
- b. The standard operating procedures covering the selection and use of respirators. Respiratory selection shall be determined by the hazard to which the worker is exposed.
- c. Medical evaluation of each user to verify that the worker may be assigned to an activity where respiratory protection is required.
- d. Training in the proper use and limitations of respirators.
- e. Respirator fit-testing, i.e., quantitative, qualitative and individual functional fit checks.
- f. Regular cleaning and disinfection of respirators.
- g. Routine inspection of respirators during cleaning and after each use when designated for emergency use.
- h. Storage of respirators in convenient, clean, and sanitary locations.
- i. Surveillance of regulated area conditions and degree of employee exposure (e.g., through air monitoring).
- j. Regular evaluation of the continued effectiveness of the respiratory protection program.
- k. Recognition and procedures for the resolution of special problems as they affect respirator use (e.g., no facial hair that comes between the respirator face piece and face or interferes with valve function; prescription eye wear usage; contact lenses usage; etc.).
- l. Proper training in putting on and removing respirators.

1.12.1 Respiratory Fit Testing

A qualitative or quantitative fit test conforming to 29 CFR 1926, Section 1101, Appendix C shall be conducted for each Contractor worker required to wear a respirator, and for the Contracting Officer and authorized visitors who enter a

regulated area where respirators are required to be worn. A respirator fit test shall be performed for each worker wearing a negative-pressure respirator prior to initially wearing a respirator on this project and every 12 months thereafter.

The qualitative fit tests may be used only for testing the fit of half-mask respirators where they are permitted to be worn, or of full-facepiece air purifying respirators where they are worn at levels at which half-facepiece air purifying respirators are permitted. If physical changes develop that will affect the fit, a new fit test for the worker shall be performed. Functional fit checks shall be performed by employees each time a respirator is put on and in accordance with the manufacturer's recommendation.

1.12.2 Respirator Selection and Use Requirements

The Contractor shall provide respirators, and ensure that they are used as required by 29 CFR 1926, Section .1101 and in accordance with the manufacturer's recommendations. Respirators shall be jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health (MSHA/NIOSH), or by NIOSH, under the provisions of 42 CFR 84, for use in environments containing airborne asbestos fibers. The initial respirator selection and the decisions regarding the upgrading or downgrading of respirator type shall be made by the Contractor's Designated IH based on the measured or anticipated airborne asbestos fiber concentrations to be encountered. Recommendations made by the Contractor's Designated IH to downgrade respirator type shall be submitted in writing to the Contracting Officer. The Contractor's Designated Competent Person in consultation with the Designated IH, shall have the authority to take immediate action to upgrade or downgrade respiratory type when there is an immediate danger to the health and safety of the wearer. Respirators shall be used in the following circumstances:

- a. During all Class I asbestos jobs.
- b. During all Class II work where the ACM is not removed in a substantially intact state.
- c. During all Class II and III work which is not performed using wet methods. Respirators need not be worn during removal of ACM from sloped roofs when a negative exposure assessment has been made and ACM is removed in an intact state.
- d. During all Class II and III asbestos jobs where the Contractor does not produce a negative exposure assessment.
- e. During all Class III jobs where TSI or surfacing ACM is being disturbed.
- f. During all Class IV work performed within regulated areas where employees performing other work are required to wear respirators.
- g. During all work where employees are exposed above the PEL-TWA or PEL-Excursion Limit.
- h. In emergencies

1.12.3 Class I Work

The Contractor shall provide: (1) a tight-fitting, powered air purifying respirator equipped with high efficiency filters, or (2) a full-facepiece supplied air respirator operated in the pressure demand mode, equipped with HEPA egress cartridges, or (3) an auxiliary positive pressure self-contained breathing apparatus, for all employees within the regulated area where Class I work is being performed; provided that a negative exposure assessment has not been produced, and that the exposure level will not exceed 1 f/cc as an 8-hour time weighted average. A full-facepiece supplied air respirator, operated in the pressure demand mode, equipped with an auxiliary positive pressure self-contained

breathing apparatus shall be provided under such conditions, if the exposure assessment indicates exposure levels above 1 f/cc as an 8-hour time weighted average.

1.12.4 Class II and III Work

The Contractor shall provide an air purifying respirator, other than a disposable respirator, equipped with high-efficiency filters whenever the employee performs Class II and III asbestos jobs where the Contractor does not produce a negative exposure assessment ; and Class III jobs where TSI or surfacing ACM is being disturbed.

1.12.5 Sanitation

Employees who wear respirators shall be permitted to leave work areas to wash their faces and respirator facepieces whenever necessary to prevent skin irritation associated with respirator use.

1.13 HAZARD COMMUNICATION PROGRAM

A hazard communication program shall be established and implemented in accordance with 29 CFR 1926, Section .59. Material safety data sheets (MSDSs) shall be provided for all hazardous materials brought onto the worksite. One copy shall be provided to the Contracting Officer and 1 copy shall be included in the Contractor's Hazard Communication Program.

1.14 LICENSES, PERMITS AND NOTIFICATIONS

1.14.1 General Legal Requirements

Necessary licenses, permits and notifications shall be obtained in conjunction with the project's asbestos abatement, transportation and disposal actions and timely notification furnished of such actions as required by federal, state, regional, and local authorities. The Contractor shall notify the Air and Asbestos Compliance Section of the Kansas Department of Health and Environment in writing, at least 10 days prior to the commencement of work, in accordance with 40 CFR 61, Subpart M, and state and local requirements to include the mandatory "Notification of Demolition and Renovation Record" form and other required notification documents. Notification shall be by Certified Mail, Return Receipt Requested. The Contractor shall furnish copies of the receipts to the Contracting Officer, in writing, prior to the commencement of work. Local fire department shall be notified 3 days before fire-proofing material is removed from a building and the notice shall specify whether or not the material contains asbestos. A copy of the rental company's written acknowledgment and agreement shall be provided as required by paragraph RENTAL EQUIPMENT. For licenses, permits, and notifications that the Contractor is responsible for obtaining, the Contractor shall pay any associated fees or other costs incurred.

1.15 PERSONAL PROTECTIVE EQUIPMENT

Two complete sets of personal protective equipment shall be made available to the Contracting Officer and authorized visitors for entry to the regulated area. Contracting Officer and authorized visitors shall be provided with training equivalent to that provided to Contractor employees in the selection, fitting, and use of the required personal protective equipment and the site safety and health requirements. Contractor workers shall be provided with personal protective clothing and equipment and the Contractor shall ensure that it is worn properly. The Contractor's Designated IH and Designated Competent Person shall select and approve all the required personal protective clothing and equipment to be used.

1.15.1 Respirators

Respirators shall be in accordance with paragraph RESPIRATORY PROTECTION PROGRAM.

1.15.2 Whole Body Protection

Personnel exposed to airborne concentrations of asbestos that exceed the PELs, or for all OSHA Classes of work for which a required negative exposure assessment is not produced, shall be provided with whole body protection and such protection shall be worn properly. The Contractor's Designated IH and Competent Person shall select and approve the whole body protection to be used. The Competent Person shall examine work suits worn by employees at least once per work shift for rips or tears that may occur during performance of work. When rips or tears are detected while an employee is working, rips and tears shall be immediately mended, or the work suit shall be immediately replaced. Disposable whole body protection shall be disposed of as asbestos contaminated waste upon exiting from the regulated area. Reusable whole body protection worn shall be either disposed of as asbestos contaminated waste upon exiting from the regulated area or be properly laundered in accordance with 29 CFR 1926, Section .1101. Whole body protection used for asbestos abatement shall not be removed from the worksite by a worker to be cleaned. Recommendations made by the Contractor's Designated IH to downgrade whole body protection shall be submitted in writing to the Contracting Officer. The Contractor's Designated Competent Person, in consultation with the Designated IH, has the authority to take immediate action to upgrade or downgrade whole body protection when there is an immediate danger to the health and safety of the wearer.

1.15.2.1 Coveralls

Disposable-breathable coveralls with a zipper front shall be provided. Sleeves shall be secured at the wrists, and foot coverings secured at the ankles.

1.15.2.2 Work Clothing

An additional coverall shall be provided when the abatement and control method employed does not provide for the exit from the regulated area directly into an attached decontamination unit. Cloth work clothes for wear under the protective coverall, and foot coverings, shall be provided when work is being conducted in low temperature conditions. Cloth work clothes shall be either disposed of as asbestos contaminated waste or properly laundered in accordance with 29 CFR 1926, Section .1101.

1.15.2.3 Gloves

Gloves shall be provided to protect the hands. Where there is the potential for hand injuries (i.e., scrapes, punctures, cuts, etc.) a suitable glove shall be provided and used.

1.15.2.4 Foot Coverings

Footwear, as required by OSHA and EM 385-1-1, that is appropriate for safety and health hazards in the area shall be worn. Rubber boots shall be used in moist or wet areas. Reusable footwear removed from the regulated area shall be thoroughly decontaminated or disposed of as ACM waste. Disposable protective foot covering shall be disposed of as ACM waste. If rubber boots are not used, disposable foot covering shall be provided.

1.15.2.5 Head Covering

Hood type disposable head covering shall be provided. In addition, protective head gear (hard hats) shall be provided as required. Hard hats shall only be removed from the regulated area after being thoroughly decontaminated.

1.15.2.6 Protective Eye Wear

Eye protection provided shall be in accordance with ANSI Z87.1.

1.16 HYGIENE FACILITIES AND PRACTICES

The Contractor shall establish a decontamination area for the decontamination of employees, material and equipment. The Contractor shall ensure that employees enter and exit the regulated area through the decontamination area.

1.16.1 Shower Facilities

Shower facilities, when provided, shall comply with 29 CFR 1910, Section .141(d)(3).

1.16.2 Lunch Areas

The Contractor shall provide lunch areas in which the airborne concentrations of asbestos are below 0.01 f/cc.

1.16.3 Smoking

Smoking, if allowed by the Contractor, shall only be permitted in designated areas approved by the Contracting Officer.

1.17 REGULATED AREAS

All Class I, II, and III asbestos work shall be conducted within regulated areas.

The regulated area shall be demarcated to minimize the number of persons within the area and to protect persons outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they shall demarcate the regulated area. Access to regulated areas shall be limited to authorized persons. The Contractor shall control access to regulated areas, ensure that only authorized personnel enter, and verify that Contractor required medical surveillance, training and respiratory protection program requirements are met prior to allowing entrance.

1.18 WARNING SIGNS AND TAPE

Warning signs and tape printed bilingually in English and Spanish shall be provided at the regulated boundaries and entrances to regulated areas. The Contractor shall ensure that all personnel working in areas contiguous to regulated areas comprehend the warning signs. Signs shall be located to allow personnel to read the signs and take the necessary protective steps required before entering the area. Warning signs, shall be in vertical format conforming to 29 CFR 1910 and 29 CFR 1926, Section .1101, a minimum of 20 by 14 inches, and displaying the following legend in the lower panel:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

Spacing between lines shall be at least equal to the height of the upper of any two lines.

1.19 WARNING LABELS

Warning labels shall be affixed to all asbestos disposal containers used to contain asbestos materials, scrap, waste debris, and other products contaminated with asbestos. Containers with preprinted warning labels conforming to requirements are acceptable. Warning labels shall conform to 29 CFR 1926, Section .1101 and shall be of sufficient size to be clearly legible displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

1.20 TOOLS

Vacuums shall be leak proof to the filter, equipped with HEPA filters, of sufficient capacity necessary to capture velocity at the nozzle or nozzle attachment to efficiently collect, transport and retain the ACM waste material. Power tools shall not be used to remove ACM unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation capture and collection system, or has otherwise been approved for use by the Contracting Officer. Residual asbestos shall be removed from reusable vacuum, filtration and ventilation equipment prior to storage and reuse. Reusable tools shall be thoroughly decontaminated prior to being removed from regulated areas.

1.21 RENTAL EQUIPMENT

If rental equipment is to be used, written notification shall be provided to the rental agency, concerning the intended use of the equipment, the possibility of asbestos contamination of the equipment and the steps that will be taken to decontaminate such equipment. A written acceptance of the terms of the Contractor's notification shall be obtained from the rental agency.

1.22 AIR MONITORING EQUIPMENT

The Contractor's Designated IH shall approve air monitoring equipment to be used to collect samples. The equipment shall include, but shall not be limited to:

- a. High-volume sampling pumps that can be calibrated and operated at a constant airflow up to 16 liters per minute when equipped with a sampling train of tubing and filter cassette.
- b. Low-volume, battery powered, body-attachable, portable personal pumps that can be calibrated to a constant airflow up to approximately 3.5 liters per minute when equipped with a sampling train of tubing and filter cassette, and a self-contained rechargeable power pack capable of sustaining the calibrated flow rate for a minimum of 10 hours. The pumps shall also be equipped with an automatic flow control unit which shall maintain a constant flow, even as filter resistance increases due to accumulation of fiber and debris on the filter surface.
- c. Single use standard 25 mm diameter cassette, open face, 0.8 micron pore size, mixed cellulose ester membrane filters and cassettes with 50 mm electrically conductive extension cowl, and shrink bands, to be used with low flow pumps in accordance with 29 CFR 1926, Section .1101 for personal air sampling.
- d. Single use standard 25 mm diameter cassette, open face, 0.45 micron pore size, mixed cellulose ester membrane filters and cassettes with 50 mm electrically conductive cowl, and shrink bands, to be used with high flow pumps when conducting environmental area sampling using NIOSH 84-100 Methods 7400 and 7402.
- e. Appropriate plastic tubing to connect the air sampling pump to the selected filter cassette.
- f. A flow calibrator capable of calibration to within plus or minus 2 percent of reading over a temperature range of minus 4 to plus 140 degrees F and traceable to a NIST primary standard.

1.23 EXPENDABLE SUPPLIES

1.23.1 Glovebag

Glovebags shall be provided as described in 29 CFR 1926, Section .1101 . The glovebag assembly shall be 6 mil thick plastic, prefabricated and seamless at the bottom with preprinted OSHA warning label.

1.23.2 Duct Tape

Industrial grade duct tape of appropriate widths suitable for bonding sheet plastic and disposal container shall be provided.

1.23.3 Disposal Containers

Leak-tight (defined as solids, liquids, or dust that cannot escape or spill out) disposal containers shall be provided for ACM wastes as required by 29 CFR 1926 Section .1101.

1.23.4 Disposal Bags

Leak-tight bags, 6 mil thick, shall be provided for placement of asbestos generated waste.

1.23.5 Fiberboard Drums

Fiberboard drums shall be provided as needed. Filled drums shall be sealed leak-tight with duct tape.

1.23.6 Cardboard Boxes

Heavy-duty corrugated cardboard boxes, coated with plastic or wax to retard deterioration from moisture, shall be provided if required by state and local requirements. Boxes shall fit into selected ACM disposal bags. Filled boxes shall be sealed leak-tight with duct tape.

1.23.7 Sheet Plastic

Sheet plastic shall be polyethylene of 6 mil minimum thickness and shall be provided in the largest sheet size necessary to minimize seams. Film shall be clear frosted or black and conform to ASTM D 4397, except as specified below:

1.23.7.1 Flame Resistant

Where a potential for fire exists, flame-resistant sheets shall be provided. Film shall be frosted or black and shall conform to the requirements of NFPA 701.

1.23.7.2 Reinforced

Reinforced sheets shall be provided where high skin strength is required, such as where it constitutes the only barrier between the regulated area and the outdoor environment. The sheet stock shall consist of translucent, nylon-reinforced or woven-polyethylene thread laminated between 2 layers of polyethylene film. Film shall meet flame resistant standards of NFPA 701.

1.23.8 Amended Water

Amended water shall meet the requirements of ASTM D 1331.

1.23.9 Mastic Removing Solvent

Mastic removing solvent shall be nonflammable and shall not contain methylene chloride, glycol ether, or halogenated hydrocarbons. Solvents used onsite shall have a flash point greater than 140 degrees F.

1.23.10 Leak-tight Wrapping

Two layers of 6 mil minimum thick polyethylene sheet stock shall be used for the containment of removed asbestos-containing components or materials such as reactor vessels, large tanks, boilers, insulated pipe segments and other materials too large to be placed in disposal bags. Prior to removal of the ACM component or material, each layer shall be individually leak-tight sealed with duct tape.

1.23.11 Wetting Agents

Removal encapsulant (a penetrating encapsulant) shall be provided when conducting removal abatement activities that require a longer removal time or are subject to rapid evaporation of amended water. The removal encapsulant shall be capable of wetting the ACM and retarding fiber release during disturbance of the ACM greater than or equal to that provided by amended water. Performance requirements for penetrating encapsulants are specified in paragraph ENCAPSULANTS.

1.24 MISCELLANEOUS ITEMS

A sufficient quantity of other items, such as, but not limited to: scrapers, brushes, brooms, staple guns, tarpaulins, shovels, rubber squeegees, dust pans, other tools, scaffolding, staging, enclosed chutes, wooden ladders, lumber necessary for the construction of containments, UL approved temporary electrical equipment, material and cords, ground fault circuit interrupters, water hoses of sufficient length, fire extinguishers, first aid kits, portable toilets, logbooks, log forms, markers with indelible ink, spray paint in bright color to mark areas, project boundary fencing, etc., shall be provided.

PART 2 PRODUCTS

2.1 ENCAPSULANTS

Encapsulants shall conform to USEPA requirements, shall contain no toxic or hazardous substances and no solvent and shall meet the following requirements:

ALL ENCAPSULANTS

Requirement	Test Standard
Flame Spread - 25, Smoke Emission - 50	ASTM E 84
Combustion Toxicity Zero Mortality	Univ. of Pittsburgh Protocol
Life Expectancy, 20 yrs Accelerated Aging Test	ASTM C 732
Permeability, Minimum 0.4 perms	ASTM E 96

Additional Requirements for Lockdown Encapsulant

Requirement	Test Standard
Fire Resistance, Negligible affect on fire resistance rating over 3 hour test (Tested with fireproofing over encapsulant applied directly to steel member)	ASTM E 119
Bond Strength, 100 pounds of force/foot (Tests compatibility with cementitious and fibrous fireproofing)	ASTM E 736

ALL ENCAPSULANTS

Requirement	Test Standard
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2.2 RECYCLABLE MATERIALS

The Contractor shall comply with EPA requirements in accordance with Section 01670 RECYCLED / RECOVERED MATERIALS.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Asbestos abatement work tasks shall be performed as summarized in paragraph DESCRIPTION OF WORK and the Contractor's Accident Prevention Plan, Asbestos Hazard Abatement Plan, and the Activity Hazard Analyses. The Contractor shall use the engineering controls and work practices required in 29 CFR 1926, Section .1101(g) in all operations regardless of the levels of exposure. Personnel shall wear and utilize protective clothing and equipment as specified. The Contractor shall not permit eating, smoking, drinking, chewing or applying cosmetics in the regulated area. All hot work (burning, cutting, welding, etc.) shall be conducted under controlled conditions in conformance with 29 CFR 1926, Section .352, Fire Prevention. Personnel of other trades, not engaged in asbestos abatement activities, shall not be exposed at any time to airborne concentrations of asbestos unless all the administrative and personal protective provisions of the Contractor's Accident Prevention Plan are complied with. Power to the regulated area shall be locked-out and tagged in accordance with 29 CFR 1910, and temporary electrical service with ground fault circuit interrupters shall be provided as needed. Temporary electrical service shall be disconnected when necessary for wet removal. The Contractor shall stop abatement work in the regulated area immediately when the airborne total fiber concentration: (1) equals or exceeds 0.01 f/cc, or the pre-abatement concentration, whichever is greater, outside the regulated area; or (2) equals or exceeds 1.0 f/cc inside the regulated area. The Contractor shall correct the condition to the satisfaction of the Contracting Officer, including visual inspection and air sampling. Work shall resume only upon notification by the Contracting Officer. Corrective actions shall be documented.

3.2 PROTECTION OF ADJACENT WORK OR AREAS TO REMAIN

Asbestos abatement shall be performed without damage to or contamination of adjacent work or area. Where such work or area is damaged or contaminated, as verified by the Contracting Officer using visual inspection or sample analysis, it shall be restored to its original condition or decontaminated by the Contractor at no expense to the Government, as deemed appropriate by the Contracting Officer. This includes inadvertent spill of dirt, dust or debris in which it is reasonable to conclude that asbestos may exist. When these spills occur, work shall stop in all effected areas immediately and the spill shall be cleaned. When satisfactory visual inspection and air sampling analysis results are obtained and have been evaluated by the Contractor's Designated IH and the Contracting Officer, work shall proceed.

3.3 OBJECTS

3.3.1 Removal of Mobile Objects

Mobile objects, furniture, and equipment will be removed from the area of work by the Government before asbestos abatement work begins.

3.4 BUILDING VENTILATION SYSTEM AND CRITICAL BARRIERS

Building ventilating systems supplying air into or returning air out of a

regulated area shall be shut down and isolated by lockable switch or other positive means in accordance with 29 CFR 1910, Section.147 or isolated by airtight seals to prevent the spread of contamination throughout the system. Air-tight critical barriers shall be installed on building ventilating openings located inside the regulated area that supply or return air from the building ventilation system or serve to exhaust air from the building. Edges to wall, ceiling and floor surfaces shall be sealed with industrial grade duct tape.

3.5 PRECLEANING

Surfaces in work areas shall be cleaned by HEPA vacuum and adequately wet wiped prior to establishment of containment.

3.6 METHODS OF COMPLIANCE

3.6.1 Mandated Practices

The Contractor shall employ proper handling procedures in accordance with 29 CFR 1926 and 40 CFR 61, Subpart M, and the specified requirements. The specific abatement techniques and items identified shall be detailed in the Contractor's Asbestos Hazard Abatement Plan including, but not limited to, details of construction materials, equipment, and handling procedures. The Contractor shall use the following engineering controls and work practices in all operations, regardless of the levels of exposure:

- a. Vacuum cleaners equipped with HEPA filters to collect debris and dust containing ACM.
- b. Wet methods or wetting agents to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup; except where it can be demonstrated that the use of wet methods is unfeasible due to, for example, the creation of electrical hazards, equipment malfunction, and in roofing.
- c. Prompt clean-up and disposal in leak-tight containers of wastes and debris contaminated with asbestos.
- d. Inspection and repair of polyethylene in work and high traffic areas.
- e. Cleaning of equipment and surfaces of containers filled with ACM prior to removing them from the equipment room or area.

3.6.2 Control Methods

The Contractor shall use the following control methods to comply with the PELs:

- b. Enclosure or isolation of processes producing asbestos dust;
- d. Use of other work practices and engineering controls;
- e. Where the feasible engineering and work practice controls described above are not sufficient to reduce employee exposure to or below the PELs, the Contractor shall use them to reduce employee exposure to the lowest levels attainable by these controls and shall supplement them by the use of respiratory protection that complies with paragraph, RESPIRATORY PROTECTION PROGRAM.

3.6.3 Unacceptable Practices

The following work practices and engineering controls shall not be used for work related to asbestos or for work which disturbs ACM, regardless of measured levels of asbestos exposure or the results of initial exposure assessments:

- a. High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.
- b. Compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.
- c. Dry sweeping, shoveling, or other dry clean-up of dust and debris containing ACM.
- d. Employee rotation as a means of reducing employee exposure to asbestos.

3.6.4 Class I Work Procedures

In addition to requirements of paragraphs Mandated Practices and Control Methods, the following engineering controls and work practices shall be used:

- a. A Competent Person shall supervise the installation and operation of the control system.
- b. For jobs involving the removal of more than 25 feet or 10 square feet of TSI or surfacing material, the Contractor shall place critical barriers over all openings to the regulated area.
- c. HVAC systems shall be isolated in the regulated area by sealing with a double layer of plastic or air-tight rigid covers.
- d. Impermeable dropcloths (6 mil or greater thickness) shall be placed on surfaces beneath all removal activity.
- e. Objects within the regulated area shall be handled as specified in paragraph OBJECTS.
- f. Where a negative exposure assessment has not been provided or where exposure monitoring shows the PEL was exceeded, the regulated area shall be ventilated to move contaminated air away from the employee's breathing zone toward a HEPA unit or collection device.

3.6.5 Specific Control Methods for Class I Work

In addition to requirements of paragraph Class I Work Procedures, Class I asbestos work shall be performed using the control methods identified in the subparagraphs below.

3.6.5.1 Glovebag Systems

The glovebag system shall be used to remove ACM from straight runs of piping and elbows and other connections. Glovebags shall be used without modification and shall be smoke-tested for leaks and any leaks sealed prior to use. Glovebags shall be installed to completely cover the circumference of pipe or other structures where the work is to be done. Glovebags shall be used only once and shall not be moved. Glovebags shall not be used on surfaces that have temperatures exceeding 150 degrees F. Prior to disposal, glovebags shall be collapsed by removing air within them using a HEPA vacuum. Before beginning the operation, loose and friable material adjacent to the glovebag operation shall be wrapped and sealed in 2 layers of plastic or otherwise rendered intact. At least 2 persons shall perform Class I glovebag removal. Asbestos regulated work areas shall be established as specified and shown on detailed drawings and plans for glovebag abatement. Designated boundary limits for the asbestos work shall be established with rope or other continuous barriers and all other requirements for asbestos control areas shall be maintained, including area signage and boundary warning tape .

- a. In addition to requirements for negative pressure glovebag systems above, the Contractor shall attach HEPA vacuum systems or other devices to the bag to prevent collapse during removal of ACM from straight runs of piping and elbows and other connections.
- b. The negative pressure glove boxes used to remove ACM from pipe runs shall be fitted with gloved apertures and a bagging outlet and constructed with rigid sides from metal or other material which can withstand the weight of the ACM and water used during removal. A negative pressure shall be created in the system using a HEPA filtration system. The box shall be smoke tested for leaks prior to each use.

3.6.5.2 Mini-Enclosures

Mini-containment (small walk-in enclosure) to accommodate no more than 2 persons, may be used if the disturbance or removal can be completely contained by the enclosure with the following specifications and work practices. The mini-enclosure shall be inspected for leaks and smoke tested before each use. Air movement shall be directed away from the employee's breathing zone within the mini-enclosure.

3.6.5.3 Wrap and Cut Operation

Prior to cutting pipe, the asbestos-containing insulation shall be wrapped with polyethylene and securely sealed with duct tape to prevent asbestos becoming airborne as a result of the cutting process. The following steps shall be taken: install glovebag, strip back sections to be cut 6 inches from point of cut, and cut pipe into manageable sections.

3.6.6 Class II Work

In addition to the requirements of paragraphs Mandated Practices and Control Methods, the following engineering controls and work practices shall be used:

- a. A Competent Person shall supervise the work.
- b. For indoor work, critical barriers shall be placed over all openings to the regulated area.
- c. Impermeable dropcloths shall be placed on surfaces beneath all removal activity.

3.6.7 Specific Control Methods for Class II Work

In addition to requirements of paragraph Class II Work, Class II work shall be performed using the following methods:

3.6.7.1 Vinyl and Asphalt Flooring Materials

When removing vinyl and asphalt flooring materials which contain ACM, the Contractor shall use the following practices. Tiles shall be removed intact (if possible); wetting is not required when tiles are heated and removed intact. Flooring shall not be sanded. Scraping of residual adhesive shall be performed using wet methods. Mechanical chipping is prohibited unless performed in a negative pressure enclosure. Dry sweeping is prohibited. The Contractor shall use vacuums equipped with HEPA filter, disposable dust bag, and metal floor tool (no brush) to clean floors.

3.6.7.2 Roofing Material

When removing roofing materials which contain ACM as described in 29 CFR 1926, Section .1101(g)(8)(ii), the Contractor shall use the following practices.

Roofing material shall be removed in an intact state. Wet methods shall be used to remove roofing materials that are not intact, or that will be rendered not intact during removal, unless such wet methods are not feasible or will create safety hazards. When removing built-up roofs, with asbestos-containing roofing felts and an aggregate surface, using a power roof cutter, all dust resulting from the cutting operations shall be collected by a HEPA dust collector, or shall be HEPA vacuumed by vacuuming along the cut line. Asbestos-containing roofing material shall not be dropped or thrown to the ground, but shall be lowered to the ground via covered, dust-tight chute, crane, hoist or other method approved by the Contracting Officer. Any ACM that is not intact shall be lowered to the ground as soon as practicable, but not later than the end of the work shift. While the material remains on the roof it shall be kept wet or placed in an impermeable waste bag or wrapped in plastic sheeting. Intact ACM shall be lowered to the ground as soon as practicable, but not later than the end of the work shift. Unwrapped material shall be transferred to a closed receptacle precluding the dispersion of dust. Critical barriers shall be placed over roof level heating and ventilation air intakes.

3.6.7.3 Other Class II Jobs

The Contractor shall use the following work practices when performing Class II removal of ACM: The material shall be thoroughly wetted with amended water prior and during its removal. The material shall be removed in an intact state. Cutting, abrading or breaking the material is prohibited. The ACM removed shall be immediately bagged or wrapped.

3.6.8 Specific Control Methods for Class III Work

Class III asbestos work shall be conducted using engineering and work practice controls which minimize the exposure to employees performing the asbestos work and to bystander employees. The work shall be performed using wet methods and, to the extent feasible, using local exhaust ventilation. The Contractor shall use impermeable dropcloths and shall isolate the operation, using mini-enclosures or glovebag systems, where the disturbance involves drilling, cutting, abrading, sanding, chipping, breaking, or sawing of TSI or surfacing material.

3.6.9 Specific Control Methods for Class IV Work

Class IV jobs shall be conducted using wet methods, HEPA vacuums, and prompt clean-up of debris containing ACM. Employees cleaning up debris and waste in a regulated area where respirators are required shall wear the selected respirators.

3.6.10 Alternative Methods for Roofing Materials and Asphaltic Wrap

The Contractor shall use the following engineering controls and work practices when removing, repairing, or maintaining intact pipeline asphaltic wrap, or roof cements, mastics, coatings, or flashings which contain asbestos fibers encapsulated or coated by bituminous or resinous compounds. If during the course of the job the material does not remain intact, the Contractor shall use the procedures described in paragraph Roofing Material. Before work begins, and as needed during the job, the Designated Competent Person shall conduct an inspection and determine that the roofing material is intact and will likely remain intact. The material shall not be sanded, abraded, or ground. Manual methods which would render the material non-intact shall not be used. Roofing material shall not be dropped or thrown to the ground but shall be lowered via covered, dust-tight chute, crane, hoist or other method approved by the Contracting Officer. All such material shall be removed from the roof as soon as practicable, but not later than the end of the work shift. Removal or disturbance of pipeline asphaltic wrap shall be performed using wet methods.

3.6.11 Cleaning After Asbestos Removal

After completion of all asbestos removal work, surfaces from which ACM has been

removed shall be wet wiped or sponged clean, or cleaned by some equivalent method to remove all visible residue. Run-off water shall be collected and filtered through a dual filtration system. A first filter shall be provided to remove fibers 20 micrometers and larger, and a final filter provided that removes fibers 5 micrometers and larger. After the gross amounts of asbestos have been removed from every surface, remaining visible accumulations of asbestos on floors shall be collected using plastic shovels, rubber squeegees, rubber dustpans, and HEPA vacuum cleaners as appropriate to maintain the integrity of the regulated area. When TSI and surfacing material has been removed, workmen shall use HEPA vacuum cleaners to vacuum every surface. Surfaces or locations which could harbor accumulations or residual asbestos dust shall be checked after vacuuming to verify that no asbestos-containing material remains; and shall be re-vacuumed as necessary to remove the ACM.

3.6.12 Sealing Contaminated Items Designated for Disposal

Contaminated architectural, mechanical, and electrical appurtenances such as Venetian blinds, full height partitions, carpeting, duct work, pipes and fittings, radiators, light fixtures, conduit panels, and other contaminated items designated for removal shall be coated with an asbestos lockdown encapsulant at the demolition site before being removed from the asbestos control area. These items shall be vacuumed prior to application of the lockdown encapsulant. The asbestos lockdown encapsulant shall be tinted a contrasting color and shall be spray applied by airless method. Thoroughness of sealing operation shall be visually gauged by the extent of colored coating on exposed surfaces.

3.7 LOCKDOWN

Prior to removal of plastic barriers and after clean-up of gross contamination and final visual inspection, a post removal (lockdown) encapsulant shall be spray applied to ceiling, walls, floors, and other surfaces in the regulated area.

3.8 FINAL CLEANING AND VISUAL INSPECTION

Upon completion of abatement, the regulated area shall be cleaned by collecting, packing, and storing all gross contamination. A final cleaning shall be performed using HEPA vacuum and wet cleaning of all exposed surfaces and objects in the regulated area. Upon completion of the cleaning, the Contractor shall conduct a visual pre-inspection of the cleaned area in preparation for a final inspection before final air clearance monitoring and recleaning, as necessary. Upon completion of the final cleaning, the Contractor and the Contracting Officer shall conduct a final visual inspection of the cleaned regulated area in accordance with ASTM E 1368 and document the results. If the Contracting Officer rejects the clean regulated area as not meeting final cleaning requirements, the Contractor shall reclean as necessary and have a follow-on inspection conducted with the Contracting Officer. Recleaning and follow-up reinspection shall be at the Contractor's expense.

3.9 EXPOSURE ASSESSMENT AND AIR MONITORING

3.9.1 General Requirements For Exposure

Exposure assessment, air monitoring and analysis of airborne concentration of asbestos fibers shall be performed in accordance with 29 CFR 1926, Section .1101, the Contractor's air monitoring plan, and as specified. Personal exposure air monitoring (collected at the breathing zone) that is representative of the exposure of each employee who is assigned to work within a regulated area shall be performed by the Contractor's Designated IH. Breathing zone samples shall be taken for at least 25 percent of the workers in each shift, or a minimum of 2, whichever is greater. Air monitoring results at the 95 percent confidence level shall be calculated as shown in Table 2 at the end of this section. Preabatement and abatement environmental air monitoring shall be performed by the Contractor's Designated IH. Final clearance environmental air monitoring, shall be performed

by the Contractor's Designated IH. Environmental and final clearance air monitoring shall be performed using NIOSH 84-100 Method 7400 (PCM) with optional confirmation of results by NIOSH 84-100 Method 7402 (TEM). Environmental and final clearance, air monitoring shall be conducted at a sufficient velocity and duration to establish the limit of detection of the method used at 0.005 f/cc. Confirmation of asbestos fiber concentrations (asbestos f/cc) from environmental and final clearance samples collected and analyzed by NIOSH 84-100 Method 7400 (total f/cc) may be conducted using TEM in accordance with NIOSH 84-100 Method 7402. When such confirmation is conducted, it shall be from the same sample filter used for the NIOSH 84-100 Method 7400 PCM analysis. For all Contractor required environmental or final clearance air monitoring, confirmation of asbestos fiber concentrations, using NIOSH 84-100 Method 7402, shall be at the Contractor's expense. Monitoring may be duplicated by the Government at the discretion of the Contracting Officer. Results of breathing zone samples shall be posted at the job site and made available to the Contracting Officer. The Contractor shall maintain a fiber concentration inside a regulated area less than or equal to 0.1 f/cc expressed as an 8 hour, time-weighted average (TWA) during the conduct of the asbestos abatement. If fiber concentration rises above 0.1 f/cc, work procedures shall be investigated with the Contracting Officer to determine the cause. At the discretion of the Contracting Officer, fiber concentration may exceed 0.1 f/cc but shall not exceed 1.0 f/cc expressed as an 8-hour TWA. The Contractor's workers shall not be exposed to an airborne fiber concentration in excess of 1.0 f/cc, as averaged over a sampling period of 30 minutes. Should either an environmental concentration of 1.0 f/cc expressed as an 8-hour TWA or a personal excursion concentration of 1.0 f/cc expressed as a 30-minute sample occur inside a regulated work area, the Contractor shall stop work immediately, notify the Contracting Officer, and implement additional engineering controls and work practice controls to reduce airborne fiber levels below prescribed limits in the work area. Work shall not restart until authorized by the Contracting Officer.

3.9.2 Initial Exposure Assessment

The Contractor's Designated IH shall conduct an exposure assessment immediately before or at the initiation of an asbestos abatement operation to ascertain expected exposures during that operation. The assessment shall be completed in time to comply with the requirements which are triggered by exposure data or the lack of a negative exposure assessment, and to provide information necessary to assure that all control systems planned are appropriate for that operation. The assessment shall take into consideration both the monitoring results and all observations, information or calculations which indicate employee exposure to asbestos, including any previous monitoring conducted in the workplace, or of the operations of the Contractor which indicate the levels of airborne asbestos likely to be encountered on the job. For Class I asbestos work, until the employer conducts exposure monitoring and documents that employees on that job will not be exposed in excess of PELs, or otherwise makes a negative exposure assessment, the Contractor shall presume that employees are exposed in excess of the PEL-TWA and PEL-Excursion Limit.

3.9.3 Negative Exposure Assessment

The Contractor shall provide a negative exposure assessment for the specific asbestos job which will be performed. The negative exposure assessment shall be provided within 2 days of the initiation of the project and conform to the following criteria:

- a. Objective Data: Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the PEL-TWA and PEL-Excursion Limit under those work conditions having the greatest potential for releasing asbestos.
- b. Prior Asbestos Jobs: Where the Contractor has monitored prior asbestos

jobs for the PEL and the PEL-Excursion Limit within 12 months of the current job, the monitoring and analysis were performed in compliance with asbestos standard in effect; the data were obtained during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the Contractor's current operations; the operations were conducted by employees whose training and experience are no more extensive than that of employees performing the current job; and these data show that under the conditions prevailing and which will prevail in the current workplace, there is a high degree of certainty that the monitoring covered exposure from employee exposures will not exceed the PEL-TWA and PEL-Excursion Limit.

- c. Initial Exposure Monitoring: The results of initial exposure monitoring of the current job, made from breathing zone air samples that are representative of the 8-hour PEL-TWA and 30-minute short-term exposures of each employee. The monitoring covered exposure from operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

3.9.4 Independent Environmental Monitoring

The Contractor shall provide an independent air monitoring firm to perform air monitoring during abatement. The air monitoring contractor has been provided a copy of the contract that includes this abatement work. The abatement contractor will provide the air monitoring contractor with an up-to-date copy of the accepted Asbestos Hazard Abatement Plan, Accident Prevention Plan and pertinent detailed drawings. The air monitoring contractor is required to comply with the abatement contractor's safety and health requirements. The abatement contractor will coordinate all onsite activities with the air monitoring contractor, the COR, and other affected parties as directed by the COR. The abatement contractor will provide the air monitoring contractor with an up-to-date schedule of abatement contractor work activities. The air monitoring contractor will coordinate with the abatement contractor and the COR during the performance Government required air monitoring. The abatement contractor is responsible for performing exposure assessment and personal air monitoring of abatement contractor's work. The air monitoring contractor is responsible for performing these tasks for its employee.

3.9.5 Environmental Air Monitoring During Abatement

Until an exposure assessment is provided to the Contracting Officer, environmental air monitoring shall be conducted at locations and frequencies that will accurately characterize any evolving airborne asbestos fiber concentrations.

The assessment shall demonstrate that the product or material containing asbestos minerals, or the abatement involving such product or material, cannot release airborne asbestos fibers in concentrations exceeding 0.01 f/cc as a TWA under those work conditions having the greatest potential for releasing asbestos.

The monitoring shall be at least once per shift at locations including, but not limited to, close to the work inside a regulated area; preabatement sampling locations; outside entrances to a regulated area; close to glovebag operations; representative locations outside of the perimeter of a regulated area; inside clean room; and at the exhaust discharge point of local exhaust system ducted to the outside of a containment (if used). If the sampling outside regulated area shows airborne fiber levels have exceeded background or 0.01 f/cc, whichever is greater, work shall be stopped immediately, and the Contracting Officer notified.

The condition causing the increase shall be corrected. Work shall not restart until authorized by the Contracting Officer.

3.9.6 Air-Monitoring Results and Documentation

Air sample fiber counting shall be completed and results provided within 24 hours (breathing zone samples), and 24 hours (environmental/clearance monitoring) after

completion of a sampling period. The Contracting Officer shall be notified immediately of any airborne levels of asbestos fibers in excess of established requirements. Written sampling results shall be provided within 5 working days of the date of collection. The written results shall be signed by testing laboratory analyst, testing laboratory principal and the Contractor's Designated IH. The air sampling results shall be documented on a Contractor's daily air monitoring log. The daily air monitoring log shall contain the following information for each sample:

- a. Sampling and analytical method used;
- b. Date sample collected;
- c. Sample number;
- d. Sample type: BZ = Breathing Zone (Personal), P = Preabatement, E = Environmental, C = Abatement Clearance;
- e. Location/activity/name where sample collected;
- f. Sampling pump manufacturer, model and serial number, beginning flow rate, end flow rate, average flow rate (L/min);
- g. Calibration date, time, method, location, name of calibrator, signature;
- h. Sample period (start time, stop time, elapsed time (minutes));
- i. Total air volume sampled (liters);
- j. Sample results (f/cc and S/mm square) if EPA methods are required for final clearance;
- k. Laboratory name, location, analytical method, analyst, confidence level. In addition, the printed name and a signature and date block for the Industrial Hygienist who conducted the sampling and for the Industrial Hygienist who reviewed the daily air monitoring log verifying the accuracy of the information.

3.10 CLEARANCE CERTIFICATION

When asbestos abatement is complete, ACM waste is removed from the regulated areas, and final clean-up is completed, the Contracting Officer will certify the areas as safe before allowing the warning signs and boundary warning tape to be removed. The Contractor and the Contracting Officer shall visually inspect all surfaces within the containment for residual material or accumulated debris. The Contractor shall reclean all areas showing dust or residual materials. The Contracting Officer will certify in writing that the area is safe before unrestricted entry is permitted. The Government will have the option to perform monitoring to certify the areas are safe before entry is permitted.

3.11 CLEANUP AND DISPOSAL

3.11.1 ACM Materials

ACM material resulting from abatement work, except as specified otherwise, shall be disposed of as specified and in accordance with applicable federal, state and local regulations.

3.11.2 Collection and Disposal of Asbestos

All ACM waste shall be collected and including contaminated wastewater filters, scrap, debris, bags, containers, equipment, and asbestos contaminated clothing, shall be collected and placed in leak-tight containers such as double plastic

bags sealed double wrapped polyethylene sheet ; sealed fiberboard boxes ; or other approved containers. Waste within the containers shall be wetted in case the container is breeched. Asbestos-containing waste shall be disposed of at an EPA, state and local approved asbestos landfill. For temporary storage, sealed impermeable containers shall be stored in an asbestos waste load-out unit or in a storage/transportation conveyance (i.e., dumpster, roll-off waste boxes, etc.) in a manner acceptable to and in an area assigned by the Contracting Officer. Procedure for hauling and disposal shall comply with 40 CFR 61, Subpart M, state, regional, and local standards.

3.11.3 Asbestos Waste Shipment Record

The Contractor shall complete and provide the Contracting Officer final completed copies of the Waste Shipment Record for all shipments of waste material as specified in 40 CFR 61, Subpart M and other required state waste manifest shipment records, within 3 days of delivery to the landfill. Each Waste Shipment Record shall be signed and dated by the Contractor, the waste transporter and disposal facility operator.

TABLE 2

FORMULA FOR CALCULATION OF THE 95 PERCENT CONFIDENCE LEVEL
(Reference: NIOSH 7400)

$$\text{Fibers/cc(01.95 percent CL)} = X + [(X) * (1.645) * (CV)]$$

Where: $X = ((E)(AC))/((V)(1000))$

$$E = ((F/Nf) - (B/Nb))/Af$$

CV = The precision value; 0.45 shall be used unless the analytical laboratory provides the Contracting Officer with documentation (Round Robin Program participation and results) that the laboratory's precision is better.

AC = Effective collection area of the filter in square millimeters

V = Air volume sampled in liters

E = Fiber density on the filter in fibers per square millimeter

F/Nf = Total fiber count per graticule field

B/Nb = Mean field blank count per graticule field

Af = Graticule field area in square millimeters

$$\text{TWA} = C1/T1 + C2/T2 = Cn/Tn$$

Where: C = Concentration of contaminant

T = Time sampled.

TABLE 3
NIOSH METHOD 7400
PCM ENVIRONMENTAL AIR SAMPLING PROTOCOL (NON-PERSONAL)

Sample Location	Minimum No. of Samples	Filter Pore Size (Note 1)	Min. Vol. (Note 2) (Liters)	Sampling Rate (liters/min.)
Inside Abatement Area	0.5/140 Square Meters (Notes 3 & 4)	0.45 microns	3850	2-16
Each Room in 1 Abatement Area Less than 140 Square meters		0.45 microns	3850	2-16
Field Blank	2	0.45 microns	0	0
Laboratory Blank	1	0.45 microns	0	0

Notes:

1. Type of filter is Mixed Cellulose Ester.
2. Ensure detection limit for PCM analysis is established at 0.005 fibers/cc.
3. One sample shall be added for each additional 140 square meters. (The corresponding I-P units are 5/1500 square feet).
4. A minimum of 5 samples are to be taken per abatement area, plus 2 field blanks.

TABLE 4
EPA AHERA METHOD: TEM AIR SAMPLING PROTOCOL

Location Sampled	Minimum No. of Samples	Filter Pore Size	Min. Vol. (Liters)	Sampling Rate (liters/min.)
Inside Abatement Area	5	0.45 microns	1500	2-16
Outside Abatement Area	5	0.45 microns	1500	2-16
Field Blank	2	0.45 microns	0	0
Laboratory Blank	1	0.45 microns	0	0

Notes:

1. Type of filter is Mixed Cellulose Ester.
2. The detection limit for TEM analysis is 70 structures/square mm.

Social Security Number: _____-_____-_____,

Your employer's contract for the above project requires that you be provided and you complete formal asbestos training specific to the type of work you will perform and project specific training; that you be supplied with proper personal protective equipment including a respirator, that you be trained in its use; and that you receive a medical examination to evaluate your physical capacity to perform your assigned work tasks, under the environmental conditions expected, while wearing the required personal protective equipment. These things are to be done at no cost to you. By signing this certification, you are acknowledging that your employer has met these obligations to you. The Contractor's Designated Industrial Hygienist will check the block(s) for the type of formal training you have completed. Review the checked blocks prior to signing this certification.

_____ a. For Competent Persons and Supervisors: I have completed EPA's Model Accreditation Program (MAP) training course, "Contractor/Supervisor", that meets this State's requirements.

_____ (1) For OSHA Class I work: I have completed EPA's MAP training course, "Worker", that meets this State's requirements.

_____ (2) For OSHA Class II work (where there will be abatement of more than one type of Class II materials, i.e., roofing, siding, floor tile, etc.): I have completed EPA's MAP training course, "Worker", that meets this State's requirements.

_____ (3) For OSHA Class II work (there will only be abatement of one type of Class II material):

_____ (a) I have completed an 8-hour training class on the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls of 29 CFR 1926, Section .1101(g) and hands-on training.

_____ (b) I have completed EPA's MAP training course, "Worker", that meets this State's requirements.

_____ (4) For OSHA Class III work: I have completed at least a 16-hour course consistent with EPA requirements for training of local education agency maintenance and custodial staff at 40 CFR 763, Section .92(a)(2) and the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls at 29 CFR 1926, Section .1101, and hands-on training.

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

_____ (5) For OSHA Class IV work: I have completed at least a 2-hr course consistent with EPA requirements for training of local education agency maintenance and custodial staff at 40 CFR 763, (a)(1), and the elements of 29 CFR 1926, Section .1101(k)(1) in addition to the specific work practices and engineering controls at 29 CFR 1926, Section .1101(g) and hands-on training.

_____ c. Workers, Supervisors and the Designated Competent Person: I have completed annual refresher training as required by EPA's MAP that meets this State's requirements.

PROJECT SPECIFIC TRAINING:

_____ I have been provided and have completed the project specific training required by this Contract. My employer's Designated Industrial Hygienist and Designated Competent Person conducted the training.

RESPIRATORY PROTECTION:

_____ I have been trained in accordance with the criteria in the Contractor's Respiratory Protection program. I have been trained in the dangers of handling and breathing asbestos dust and in the proper work procedures and use and limitations of the respirator(s) I will wear. I have been trained in and will abide by the facial hair and contact lens use policy of my employer.

RESPIRATOR FIT-TEST TRAINING:

_____ I have been trained in the proper selection, fit, use, care, cleaning, maintenance, and storage of the respirator(s) that I will wear. I have been fit-tested in accordance with the criteria in the Contractor's Respiratory Program and have received a satisfactory fit. I have been assigned my individual respirator. I have been taught how to properly perform positive and negative pressure fit-check upon donning negative pressure respirators each time.

MEDICAL EXAMINATION:

_____ I have had a medical examination within the last twelve months which was paid for by my employer. The examination included: health history, pulmonary function tests, and may have included an evaluation of a chest x-ray. A physician made a determination regarding my physical capacity to perform work tasks on the project while wearing personal protective equipment including a respirator. I was personally provided a copy and informed of the results of that examination. My employer's Industrial Hygienist evaluated the medical certification provided by the physician and checked the appropriate blank below. The physician determined that there:

_____ were no limitations to performing the required work tasks.

_____ were identified physical limitations to performing the required work tasks.

Date of the medical examination _____

Employee Signature _____ date _____

Contractor's Industrial

Hygienist Signature _____ date _____

-- End of Section --

SECTION 13281A

LEAD HAZARD CONTROL ACTIVITIES
03/02

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 1741 (2000) Preparation of Airborne Particulate Lead Samples Collected During Abatement and Construction Activities for Subsequent Analysis by Atomic Spectrometry

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 701 (1999) Methods of Fire Tests for Flame-Resistant Textiles and Films

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH 84-100 (1984; Supple 1985, 1987, 1988 & 1990) NIOSH Manual of Analytical Methods

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

HUD 6780 (1995; Errata Aug 1996; Rev Ch. 7 - 1997) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1926 Safety and Health Regulations for Construction

40 CFR 745 Lead-Based Paint Poisoning Prevention in Certain Residential Structures

1.2 DEFINITIONS

- a. Lead Hazard Control Activity - Any construction work where a worker may be occupationally exposed to lead and procedures have to be followed to assure that: 1). Lead inside the lead hazard control area is cleaned up to appropriate levels and 2). Lead dust does not disperse outside the lead hazard control area at unacceptable levels.
- b. Public/Commercial Building - Buildings on real property, including residential real property, generally accessible to the public except

target housing, child occupied facilities and industrial buildings. Examples include offices, stores/shopping centers, churches, schools, barracks, hospitals, museums, airports, hotels, convention centers.

- c. Industrial Building - Any building used for industrial purposes where normal operations inside the building may produce lead aerosol that will settle out on inside surfaces.
- d. Target Housing - Residential real property which is housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any one or more children age 6 years or under resides or is expected to reside in such housing for the elderly or persons with disabilities) or any 0 bedroom dwelling.
- e. Child-occupied Facility - Real property which is a building or portion of a building constructed prior to 1978 visited regularly by the same child, 6 years of age or under, on at least two different days, provided that each day's visit lasts at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities include but are not limited to, day-care centers, preschools and kindergarten classrooms.
- f. Residential Real Property - Real property on which there is situated one or more residential dwellings used or occupied, or intended to be used or occupied, in whole or in part, as the home or residence of one or more persons.

1.3 DESCRIPTION OF WORK

The work covered by this section includes the precautions specified in this section for the protection of workers and the environments.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Materials and Equipment.
Expendable Supplies.

A description of the materials, equipment and expendable supplies required; including Material Safety Data Sheets (MSDSs) for material brought onsite to perform the work.

Qualifications; G, RE.

A report providing evidence of qualifications and designating responsibilities for personnel and laboratories.

SD-06 Test Reports

Accident Prevention Plan (APP); G, RE.

A report describing how the Contractor will protect workers, building occupants, and building contents while performing lead hazard control activities; and how project clearance will be performed.

Sampling and Analysis; G, RE.

A log of the analytical results required for the sampling. The log shall be kept current.

1.5 QUALIFICATIONS

1.5.1 Qualifications and Organization Report

The Contractor shall furnish a qualification and organization report. The report shall describe the qualifications of the qualified safety and health professional (QSHP), onsite safety and health supervisor (OSHS), and labor staff. The report shall include an organization chart showing the Contractor's personnel by name and title and project specific responsibilities and authorities. The report shall describe the qualifications of the laboratories selected for this project. The report shall be signed by the Contractor and the qualified safety and health professional to indicate that all personnel and laboratories comply with certification and experience requirements of this section and that project personnel have been given the authority to complete the tasks assigned to them.

1.5.2 Personnel and Subcontractor Responsibilities and Qualifications

1.5.2.1 Qualified Safety and Health Professional (QSHP)

The QSHP shall be responsible for development of project specific requirements in the Accident Prevention Plan (APP); supervise implementation of the APP requirements; visit the site as needed to verify effectiveness of the APP and to coordinate resolution of unknown situations that may develop as the work progresses; be available to provide consultation to the Onsite Safety and Health Supervisor (OSHS); review sampling and analytical results to evaluate occupational exposure levels, and verify effectiveness of controls. The QSHP shall have demonstrable experience with the implementation of occupational safety and health regulations.

1.5.2.2 Testing Laboratories

The laboratory selected to perform analysis on paint chip, soil or dust wipe samples shall be accredited by EPA's National Lead Laboratory Accreditation Program (NLLAP). The laboratory selected perform analysis on worker exposure (industrial hygiene) samples shall be in the American Industrial Hygiene Association's Industrial Hygiene Laboratory Accreditation Program (IHLAP) and shall be successfully participating in the Proficiency Analytical Testing (PAT) program for lead.

1.5.2.3 Blood Lead Testing

The laboratory selected to perform analysis on worker blood samples shall be approved by OSHA and meet the requirements contained in http://www.osha-slc.gov/OCIS/toc_bloodlead.html.

1.5.2.4 Disposal Facility and Transporter

The Contractor shall furnish written evidence that the landfill to be used for lead hazard waste disposal is approved for lead disposal by state and local requirements. Copies of any required signed agreements between the Contractor (including subcontractors and transporters) and the lead disposal facility shall be provided.

1.6 REGULATORY REQUIREMENTS

In addition to the detailed requirements of this specification, work shall be performed in accordance with requirements of EM 385-1-1 and applicable regulations including, but not limited to 29 CFR 1910, 29 CFR 1926, especially Section .62, and the accepted Accident Prevention Plan with Appendices.

1.7 ACCIDENT PREVENTION PLAN (APP)

1.7.1 APP Content and Organization

The Contractor's Accident Prevention Plan shall be organized into 5 parts, consisting of the overall plan and 4 appendices. The overall plan shall address each element in Appendix A of EM 385-1-1 in project specific detail. The elements are: a. Signature Sheet, b. Background Information, c. Statement of Safety and Health Policy, d. Responsibilities and Lines of Authorities, e. Subcontractors and Suppliers, f. Training, g. Safety and Health Inspections, h. Safety and Health Expectations, Incentive Programs and Compliance, i. Accident Reporting, j. Medical Support, k. Corporate Plans and Programs required by this contract, (HAZCOM, Respiratory Protection).

1.7.1.1 Lead Hazard Control Plan Appendix

The Lead Hazard Control Appendix shall address occupational exposure issues and shall describe the procedures to be followed to protect employees from lead hazards while performing demolition activities. Each of the following elements shall be addressed in the lead hazard control appendix:

- a. The location and a brief description of each work activity that may emit lead into the workplace atmosphere. A description of any components containing lead shall be included and keyed to the project drawings.
- b. Description of equipment and materials, controls, crew size, worker responsibilities, and operating and maintenance procedures.
- d. Description of the specific lead control methods and procedures to protect workers and other onsite contractors from lead exposure.
- e. Technologic equipment used to keep occupational exposure below the Permissible Exposure Limit and minimize worker exposure to lead (i.e., HEPA-filtered vacuum equipment/cleaners, special negative air enclosure equipment and supplies, etc.).
- f. Worker Exposure Assessment including methods and procedures to monitor and document worker exposure to lead. Worker exposure monitoring shall be broken into two parts in the plan. Part A: Initial Determination. The Contractor shall describe worker monitoring (if performed for the "initial determination" described in 29 CFR 1926 (.62) (d). Monitoring for the initial determination may be omitted from the plan if the Contractor has sufficient proof from previous operations as specified in 29 CFR 1926 (.62) (d)(3)(iii) and (iv) that workers will not be exposed over the action level. The Contractor shall substitute objective proof of action level compliance in Part A if "initial determination" monitoring is omitted. Part B: Continued Exposure Monitoring. Worker exposure monitoring after the initial lead exposure determination has been made.
- g. Work Practices Program describing the protective clothing to be used to protect workers from lead exposure, house keeping procedures employed to minimize spread of lead contamination, hygiene facilities and practices used to prevent workers from inadvertent ingestion of lead.
- h. Administrative Control Procedures, to be used as a last resort, to limit worker exposure to lead. The worker rotation schedule to be employed, should engineering or personal protective equipment precautions fail to be effective, shall be described. This element of the plan shall be omitted if administrative controls will not be used.
- i. Medical Surveillance practices and procedures used to monitor worker

exposure to lead and to assure fitness for wearing respiratory protection devices.

- j. Worker training meeting the requirements of 29 CFR 1926 Sections (.62) and (.59) to assure workers understand hazard associated with working with lead and how to protect themselves.

- k. Security: Fenced and locked security area for the work area.

1.7.1.2 Activity Hazard Analyses Appendix

An Activity Hazard Analysis (AHA) shall be prepared for each work task data element specified on the individual work task data element sheets at the end of this section. The AHA shall be submitted to the Contracting Officer prior to beginning specified work. Format shall be in accordance with EM 385-1-1, figure 1-1. The AHA shall be continuously reviewed and modified, when appropriate, to address changing conditions or operations. Each accepted AHA shall be appended to and become part of the APP.

1.8 PRE-CONSTRUCTION SAFETY CONFERENCE

1.8.1 Conference General Requirements

The Contractor and the QSHP shall attend a pre-construction safety conference prior to starting work. Items required to be submitted shall be reviewed for completeness, and where specified, for acceptance. Details of the APP shall be revised to correct any deficiencies, and resubmitted for acceptance. Onsite work shall not begin until the APP has been accepted, unless otherwise authorized by the Contracting Officer. One copy of the APP shall be maintained in the Contractor's jobsite file, and a second copy shall be posted where it will be accessible to personnel on the site. As work proceeds, the APP shall be adapted to new situations and conditions. Changes to the APP shall be made by the QSHP with acceptance by the Contracting Officer. Should an unforeseen hazard become evident during performance of the work, the QSHP shall inform the Contracting Officer, both verbally and in writing, for immediate resolution. In the interim, the QSHP shall take necessary action to re-establish and maintain safe working conditions; and to safeguard onsite personnel, visitors, the public, and the environment. Disregard for provisions of this specification, or the accepted APP, shall be cause for stopping of work until the matter is rectified.

1.8.2 Preparatory Inspection Meeting

The Contractor shall arrange and hold a preparatory inspection meeting to review completeness and adequacy of the APP immediately prior to beginning each phase of work.

1.9 MEDICAL SURVEILLANCE REQUIREMENTS

The Contractor shall comply with the following medical surveillance requirements:

- a. The Contractor shall make every attempt to keep occupational exposure to lead on this project below the action level of 30 micrograms/cubic meter defined in 29 CFR 1926 (.62). If it is not possible, and if occupational exposures could possibly exceed the action level for 30 or more days per year, the Contractor shall institute a medical surveillance program. The program shall meet the examination frequency and content requirements specified in paragraph (j)(1), (j)(2) and (j)(3) of 29 CFR 1926 (.62). Medical removal as specified in paragraph (k) of 29 CFR 1926 (.62), if necessary, shall be at the Contractor's expense.
- b. Medical surveillance and biological monitoring shall be in compliance with 29 CFR 1926 (.62) (g) and (j). Initial biological monitoring shall be performed on lead hazard control workers prior to assignment to the

project. Workers shall not be assigned to the project if results indicate a need for restricted activities.

- c. All lead hazard control workers shall pass the medical examinations necessary to be approved by the occupational physician to wear respiratory protection on this project. Occupational physician's approval shall be given prior to assignment to the project.

1.10 RESPIRATORY PROTECTION PROGRAM

The Contractor shall have a written respiratory protection program and shall be fully capable of implementing the requirement of the respiratory protection program on this project. The respiratory protection program shall meet the requirements of 29 CFR 1926 (.62) and 29 CFR 1910 (.134). Project specific respiratory protection requirements shall be included in the lead hazard control plan appendix of the Contractor's accident prevention plan.

1.11 TRAINING

1.11.1 OSHA Training Requirements

All Contractor personnel and/or subcontractors performing or responsible for onsite oversight of demolition activities shall meet the following training requirements.

- a. Content of 29 CFR 1926 (.62) and its appendices.
- b. How operations could result in exposure over the action level.
- c. Purpose, selection, fitting, use and limitations of respirators.
- d. Purpose and description of the medical surveillance program.
- e. Use of engineering controls and good work practices to limit occupational exposure to lead.
- f. Implementation of the lead hazard control plan appendix of the accident prevention plan.
- g. Medical supervision for the use of chelating agents.
- h. Employee right of access to medical surveillance records as specified in 29 CFR 1910 (.20).

1.11.2 Qualified Safety and Health Professional

The qualified safety and health professional shall meet the training requirements in paragraph 1.12.1 and shall meet the training, experience and authority requirements in 29 CFR 1926 (.62) to be a competent person and be trained and have the experience and education to meet 40 CFR 745 Subpart L requirements to carry the following certifications:

- a. Certified Risk Assessor
- b. Certified Project Designer
- c. Certified Supervisor

1.12 SAMPLING AND ANALYSIS

1.12.1 Sampling and Analytical Procedures

1.12.1.1 Sampling and Analysis Methods

Analysis shall conform to NIOSH 84-100 Method 7082, Lead, for personal sampling

required by 29 CFR 1926 (.62) Sampling shall conform to ASTM E 1741.

1.12.2 Occupational Exposure Assessment

Sampling and analytical procedures to determine compliance with the occupational exposure monitoring requirement of this section shall be described in the lead hazard control plan appendix of the Contractor's accident prevention plan. Monitoring for the initial determination may be omitted if the Contractor has sufficient proof from previous operations as specified in 29 CFR 1926 (.62) (d)(3)(iii) and (iv) that workers will not be exposed over the action level. The following occupational exposure monitoring requirements apply and shall be implemented if the requirements of 29 CFR 1926 (.62)(d)(3) (iii) and (iv) cannot be demonstrated.

- a. During Initial Monitoring the Contractor shall representatively sample employees with the greatest potential for exposure to aerosolized lead.
- b. Continued/Additional Monitoring shall meet applicable paragraphs in 29 CFR 1926 (.62)(d)(6), Frequency, after the initial determination has been made.

1.12.3 Lead Hazard Control Area/Containment Monitoring

The Contractor shall perform a visual inspection once per day outside the demolition work area to assure visual clearance criteria are maintained. The Contractor shall clean at its own expense, and to the Contracting Officer's satisfaction, all contaminated surfaces outside the demolition area, if surfaces fail visual clearance criteria.

1.12.4 Waste Disposal Sampling

DIS Environmental Division will take samples of waste generated by demolition for disposal characterization.

1.12.5 Analytical Results

The Contractor shall develop and maintain during the course of the project a log of analytical results generated by the above sampling requirements. The log shall clearly describe the reason for which the sample was taken (worker exposure, migration control, clearance) the analytical result for each sample and evaluate if the analytical result passed or failed the action levels. At a minimum, the Contractor shall include analytical results for samples required to be taken in paragraphs Occupational Exposure Assessment, Lead Hazard Control Area/Containment Monitoring, Occupancy During Work, and Clearance Monitoring specified above.

1.13 HYGIENE FACILITIES

The Contractor shall describe the personal hygiene facilities to be used by the workers in the Lead Hazard Control Plan Appendix of the Accident Prevention Plan.

The Contractor shall provide hygiene facilities for lead hazard control workers. Hygiene facilities shall consist of the following:

1.13.1 Hand Wash Stations

The Contractor shall provide hand washing facilities for use by lead hazard control workers. Hand washing facilities shall comply with the requirements in 29 CFR 1926 (.51) (f). Faces and hands shall be washed when leaving the lead hazard control area and after each work-shift if showers are not provided.

1.13.2 Change Area

The Contractor shall provide a change area to workers. The change area shall be

equipped so that contaminated work clothing and street clothes shall be stored separately to prevent cross contamination.

1.13.3 Showers

Showers shall be provided if feasible and if worker exposures exceed the PEL. When provided, showers facilities shall meet the requirements of 29 CFR 1926 (.51) (f).

1.13.4 Eating Area

The Contractor shall set aside an area or provide a room for taking breaks and eating lunch. This area shall be kept as free as practicable from lead contamination. Workers shall be required to follow the procedures in 29 CFR 1926 (.62) (i)(4) when using the room.

1.14 POSTED WARNINGS AND NOTICES

The following regulations, warnings, and notices shall be posted at the worksite in accordance with 29 CFR 1926 (.62).

1.14.1 Regulations

At least two copies of 29 CFR 1926 (.62) shall be made available for use by either the Contracting Officer or affected workers; and for the purpose of providing required information and training to the workers involved in the project. One copy shall be maintained in the Contractor's jobsite file, and a second copy shall be posted where it will be accessible to workers on the site.

1.14.2 Warning Signs and Labels

Warning signs shall be posted in each lead hazard control area where worker exposure to lead is undetermined or where the exposures are above the permissible exposure limit as defined in 29 CFR 1926 (.62). Signs shall be located to allow personnel to read the signs and take necessary precautions before entering the lead hazard control area.

1.14.2.1 Warning Signs

Warning signs shall be in English, be of sufficient size to be clearly legible, and display the following:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

1.14.2.2 Warning Labels

Warning labels shall be affixed to all lead waste disposal containers used to hold materials, debris and other products contaminated with lead hazards; warning labels shall be in English, and be of sufficient size to be clearly legible, and display the following:

CAUTION: CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY
BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN
ACCORDANCE WITH APPLICABLE FEDERAL, STATE OR LOCAL REGULATIONS.

1.14.3 Worker Information

Right-to-know notices shall be placed in clearly visible areas accessible to

personnel on the site, to comply with Federal, state, and local regulations.

1.14.4 Air Monitoring Results

Air monitoring results shall be prepared so as to be easily understood by the workers. One copy shall be maintained in the Contractor's jobsite file, and a second copy shall be posted where it will be accessible to the workers as specified in 29 CFR 1926 (.62).

1.14.5 Emergency Telephone Numbers

A list of emergency telephone numbers shall be posted at the site. The list shall include numbers of the local hospital, emergency squad, police and fire departments, Government and Contractor representatives who can be reached 24 hours per day, and professional consultants directly involved in the project.

1.15 MATERIALS AND EQUIPMENT

Sufficient quantities of health and safety materials required by 29 CFR 1926 (.62), and other materials and equipment needed to complete the project, shall be available and kept on the site.

1.15.1 Abrasive Removal Equipment

The use of powered machine for vibrating, sanding, grinding, or abrasive blasting is prohibited unless equipped with local exhaust ventilation systems equipped with high efficiency particulate air (HEPA) filters.

1.15.2 Vacuum Systems

Vacuum systems shall be suitably sized for the project, and filters shall be capable of trapping and retaining all mono-disperse particles as small as 0.3 micrometers at a minimum efficiency of 99.97 percent. Used filters that are being replaced shall be disposed in a proper manner.

1.15.3 Heat Blower Guns

Heat blower guns shall be flameless, electrical, paint-softener type with controls to limit temperature to 1,100 degrees F. Heat blower shall be DI (non-grounded) 120 volts ac, and shall be equipped with cone, fan, glass protector and spoon reflector nozzles.

1.15.4 Chemical Paint Strippers

Chemical paint strippers shall not contain methylene chloride and shall be formulated to prevent stain, discoloration, or raising of the substrate materials.

1.15.5 Chemical Paint Stripper Neutralizer

Neutralizers for paint strippers shall be compatible with the substrate and suitable for use with the chemical stripper that has been applied to the surface.

1.15.6 Detergents and Cleaners

Detergents or cleaning agents used shall have demonstrated effectiveness in lead control work using cleaning techniques specified by HUD 6780 guidelines.

1.16 EXPENDABLE SUPPLIES

1.16.1 Polyethylene Bags

Disposable bags shall be polyethylene plastic and shall be a minimum of 6 mils thick (4 mils thick if double bags are used) or any other thick plastic material

shown to demonstrate at least equivalent performance; and shall be capable of being made leak-tight. Leak-tight means that solids, liquids or dust cannot escape or spill out.

1.16.2 Polyethylene Leak-tight Wrapping

Wrapping used to wrap lead contaminated debris shall be polyethylene plastic that is a minimum of 6 mils thick or any other thick plastic material shown to demonstrate at least equivalent performance.

1.16.3 Polyethylene Sheeting

Sheeting shall be polyethylene plastic with a minimum thickness of 6 mil, or any other thick plastic material shown to demonstrate at least equivalent performance; and shall be provided in the largest sheet size reasonably accommodated by the project to minimize the number of seams. Where the project location constitutes an out of the ordinary potential for fire, or where unusual fire hazards cannot be eliminated, flame-resistant polyethylene sheets which conform to the requirements of NFPA 701 shall be provided.

1.16.4 Tape and Adhesive Spray

Tape and adhesive shall be capable of sealing joints between polyethylene sheets and for attachment of polyethylene sheets to adjacent surfaces. After dry application, tape or adhesive shall retain adhesion when exposed to wet conditions, including amended water. Tape shall be minimum 2 inches wide, industrial strength.

1.16.5 Containers

When used, hazardous waste containers shall be leak-tight and shall be labeled in accordance with EPA, DOT and OSHA standards, as specified in paragraph WARNING LABELS. Label containers to identify contents. Appropriate containers will be provided by the government.

1.16.6 Chemicals

Chemicals, including caustics and paint strippers, shall be properly labeled, used in accordance with the manufacturers recommendations and stored in leak-tight containers. Material Safety Data Sheets (MSDSs) shall be provided and hazard communication procedures implemented in conformance with paragraph HAZARD COMMUNICATION PROGRAM.

1.17 STORAGE OF MATERIALS

Materials shall be stored protected from damage and contamination. During periods of cold weather, plastic materials shall be protected from the cold. Flammable or hazardous materials shall not be stored inside a building. Materials shall be regularly inspected to identify damaged or deteriorating items. Damaged or deteriorated items shall not be used and shall be removed from the site as soon as they are discovered. Stored materials shall not present a hazard or an inconvenience to workers, visitors, and/or other occupants and employees of the facility in which they are located.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 WORK PROCEDURES

The Contractor shall perform work following practices and procedures described accident prevention plan.

3.1.1 Demolition Work Areas, Equipment and Procedures

The Contractor shall set up demolition work areas and operate equipment within the demolition work area in a manner that will minimize migration of lead dust beyond the demolition work area boundaries and minimize exposure to workers.

3.2 USE OF HYGIENE FACILITIES WHEN LEAD HAZARD CONTROL AREA ESTABLISHED

- a. Personnel and equipment shall be decontaminated when exiting the lead hazard control area. The Contractor shall comply with the following personnel and equipment decontamination procedures:
 - (1) HEPA vacuum outer garments and equipment.
 - (2) Wet Wipe Equipment.
 - (3) Remove outer layer of garments.
 - (4) Thoroughly wash face and hands, if showering not required.
 - (5) Shower (if applicable).
 - (6) Remove Respirator (if applicable).
 - (7) Exit lead hazard control area.
- b. The Contractor shall provide, and workers shall use, a change room to change into work clothing at the beginning of a work shift. At the end of the work shift workers shall change back into street clothing and leave contaminated work clothing at the site for disposal or laundering.
- c. The Contractor shall provide an eating facility as free as practical from lead contamination. Workers shall be allowed usage of the eating facility for rest/lunch breaks.

3.3 WASTE DISPOSAL PROCEDURES

3.3.1 Construction Debris and/or Sanitary Landfill Waste

The Contractor shall dispose of the following waste streams in a construction debris landfill: Building Demolition Debris. Regular trash will be transported off site for proper disposal.

3.3.2 Waste Stream Classification

The Government shall determine the RCRA waste classification for all waste streams generated by the demolition project. DIS Environmental Division and the Contracting Officer will approve waste stream treatment and disposal requirements proposed by the Contractor.

3.3.3 RCRA Subtitle C Hazardous Waste

The Government shall dispose of the following waste streams at an approved RCRA subtitle C hazardous wastes landfill: Dust and paint chips from HEPA vacuuming operations, paint sludge and residue from chemical or heat stripping procedures.

3.3.4 Hazardous Waste Transportation and Disposal

The Contractor shall transfer hazardous wastes to DIS Environmental Division for proper disposal. All disposal costs shall be charged to the project.

3.3.5 Paint Removal Methods

Prohibited paint removal methods shall include: open flame burning or torching, including the use of heat guns having operating temperatures greater than 1,100 degrees F; machine sanding or grinding without HEPA exhaust; non-contained hydro blasting or high-pressure water wash; abrasive blasting or sandblasting without HEPA exhaust; dry scraping, except near electrical outlets or when using a heat gun. Chemical paint removers containing methylene chloride are prohibited.

Building components and structures adjacent to the removal process shall be appropriately protected from damage due to the removal process employed. Stripping shall be done according to manufacturer's recommendations. Stripped substrates shall be thoroughly washed and neutralized before applying a primer or sealing coat.

3.3.6 Low Temperature Heat Gun

Prior to beginning work, electrical fuses and adequate electrical supply shall be verified. Only fuses properly sized for the service, and otherwise permitted by code, shall be used. Properly sized fuses shall not be changed out with larger fuses to increase amperage beyond safe limits. Portable electric generators may be used to safely supply adequate amperage. An accessible garden hose with a pressure-release spray nozzle; a crowbar to remove smoldering wood; and a long-handled sledgehammer to open up walls exposed to smoldering insulation shall be readily available. A fully charged ABC-type (20 pound minimum) fire extinguisher shall be available within 100 feet of the work area. Adequate ventilation shall be provided for the work area. Worker protection shall include respirators equipped with combination HEPA filter/organic vapor cartridges. The Contractor shall equip heat guns with extension tubes or wire mesh as needed to prevent premature burnout of the heating elements and to minimize paint film scorching or smoking. Optimal heat gun/substrate separation is typically 3 to 6 inches.

3.3.7 HEPA Sanding

The HEPA vacuum shall be correctly sized to provide adequate airflow, permitting the system to operate properly. If longer exhaust hoses are used, a larger HEPA vacuum shall be provided to handle the extra pressure drop in the vacuum hose. The HEPA filter shall be operated in accordance with manufacturer's instructions. Worker protection shall include respirators or filtering facepieces equipped with HEPA filters.

3.3.8 Wet Scraping

Surfaces near electrical outlets shall not be moistened but shall be dry scraped only. Loose material shall be scraped from the surface and deposited onto the containment plastic. Damp scrapings shall be cleaned up as soon as possible to prevent tracking throughout the work area. Scraper blades shall be kept sharp. Additional scraper blades shall be supplied and shall be selected for the type of surface being scraped.

3.3.9 HEPA Vacuum Needle Gun

The vacuum needle gun head shall be equipped with a vacuum shroud designed for the surface to be treated. The needle gun shall be operated to maximize surface contact of the vacuum shroud. Work shall be positioned to minimize the degree workers must reach above shoulder level, in order to minimize worker fatigue and loss of needle gun contact with the surface.

3.3.10 Onsite Paint Removal

Paint remover shall be applied in accordance with the manufacturer's instructions. Outdoor application shall only be performed in weather conditions recommended by the manufacturer. The work area surrounding the application process shall be secured to prevent access by children and unauthorized personnel. Workers shall be provided with the appropriate personal protective clothing and equipment in accordance with manufacturer's recommendations and good industrial hygiene practice. A portable eyewash shall be provided whenever eye irritant strippers are used. An abundant source of running water shall be provided in the work area. The stripper shall be tested in a small area prior to full scale stripping. Caustic strippers shall not be used on aluminum or glass surfaces. Waste disposal shall be in accordance with paragraph WASTE

DISPOSAL PROCEDURES. Stripped surfaces shall be neutralized and washed in accordance with manufacturer's instructions and paragraph CHEMICAL PAINT STRIPPER NEUTRALIZER.

3.4 CLEARANCE PROCEDURES

3.4.1 Visual Inspection

QSHP shall perform a visual inspection, using the form at the end of this section, for each lead hazard control area to assure that lead hazard control activities, identified in the individual work task data elements, have been properly completed. The QSHP shall visually verify that lead hazards have been removed, control technology has been appropriately applied/installed and that the lead hazard control area is free of dust and paint chips generated by lead hazard control activities.

3.5 EVALUATION OF SAMPLING AND MONITORING RESULTS

Analytical results from samples taken during lead hazard control activities shall be evaluated to determine compliance with occupational safety and health standards and project specific control efficiency and clearance/clean up levels.

3.5.1 Occupational Safety and Health

The QSHP shall review the analytical results from samples taken for the initial exposure assessment and continued occupational safety and health monitoring if required. Effectiveness and adequacy of personal protective equipment, respirators, work practices, hygiene facilities and personal decontamination procedures shall be evaluated and upgrades/downgrades in equipment and procedures made. After notifying the Contracting Officer the following shall be applied:

- a. Exposures over the PEL (0.05 mg/cubic meter):
 - (1) Improve work practices to reduce exposures.
 - (2) Don respirators.
 - (3) Assure eating facilities and change rooms are clean and are free from settled dust.
 - (4) Shower as part of personal decontamination.
- b. Exposures over the Action Level (0.03 mg/cubic meter):
 - (1) Assure exposed individuals enrolled in the medical surveillance program.
 - (2) Assure exposed individuals enrolled in and up to date with lead exposure training requirements.

3.5.2 Control Efficiency of Containment Features

The QSHP shall review and document results of the visual inspection determining visual clearance criteria are being met while demolition activities are being performed. The QSHP shall review analytical results from samples taken to determine if lead is migrating outside work areas at levels in excess of clearance criteria. The QSHP shall notify the Contracting Officer and apply the following actions if results exceed project specific clearance levels outside the work area:

- a. Require/improve containment.
- b. Improve work practices to reduce lead aerosol generation.

3.5.3 Clearance

The QSHP shall review analytical results for the samples taken to determine compliance with project specific clearance requirements. The following actions apply and shall be performed at the Contractor's expense if project specific clearance levels are exceeded:

Reclean surfaces.

3.6 CLEARANCE REPORT

The QSHP shall prepare a clearance report including the following information:

- a. Start and completion dates of lead hazard control activities.
- e. The name, address and signature of the QSHP or independent risk assessor to indicate clearance requirements have been met.
- f. Certification of each Visual Inspection performed by the QSHP.
- g. Only if necessary: Analytical results from clearance sampling performed by the QSHP or independent risk assessor, the name of the laboratory that conducted the analysis. Results shall be provided in both the laboratory report and on the appropriate example forms provided at the end of this section.
- i. Documentation of hazardous waste turned in to the Government.

3.7 TITLE TO MATERIALS

Materials resulting from demolition work, except as specified otherwise, shall be come the property of the Contractor, and shall be disposed of in accordance with Section 02220A DEMOLITION, except as specified.

3.8 CONTRACTOR DISPOSAL OF HAZARDOUS WASTE

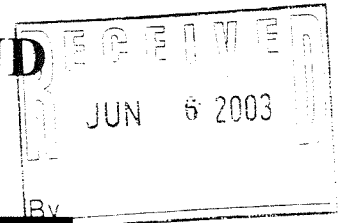
Disposal of hazardous waste is through the Government. The Contractor shall not dispose of any hazardous waste generated on site.

-- End of Section --

APPENDIX I

HAZARDOUS MATERIALS SURVEY

PRE-DEMOLITION ASBESTOS AND LEAD-BASED PAINT SURVEYS



PERFORMED AT:

**USDB CASTLE
BUILDING 475
FT. LEAVENWORTH, KANSAS**

PREPARED FOR:

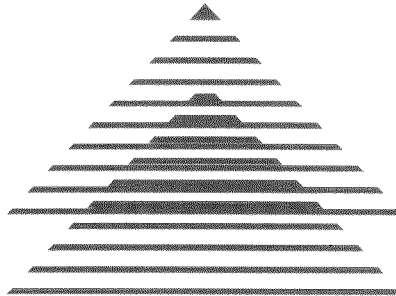
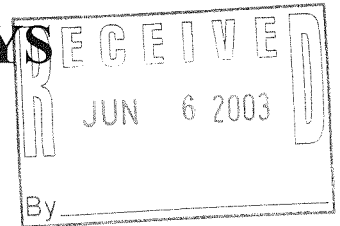
**MR. PHIL PETERSON, P.E.
BIBB AND ASSOCIATES, INC.**

PREPARED BY:

**APEX ENVIRONMENTAL CONSULTANTS, INC.
8600 W. 110TH STREET, SUITE 120
OVERLAND PARK, KANSAS 66210
TEL: (913) 338-APEX FAX: (913) 338-2741
WWW.4APEX.COM**

**APEX PROJECT NO. 30213E
JUNE 6, 2003**

PRE- DEMOLITION ASBESTOS AND LEAD-BASED PAINT SURVEYS



PERFORMED AT:

**USDB CASTLE
BUILDING 475
FT. LEAVENWORTH, KANSAS**

PREPARED FOR:

**MR. PHIL PETERSON, P.E.
PROJECT MANAGER
BIBB AND ASSOCIATES, INC.
8455 LENEXA DRIVE
LENEXA, KS 66214**

PREPARED BY:

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CLIENT:

Mr. Phil Peterson, P.E.
Project Manager
Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, KS 66214

Tel: 913-928-7000
Fax: 913-928-7500

PROJECT:

Pre-Demolition Environmental Survey Report
USDB Castle, Building 475
Fort Leavenworth, Kansas

APEX Project No. 30213E

ENVIRONMENTAL CONSULTANT:

APEX ENVIRONMENTAL CONSULTANTS, INC.

Inspector:



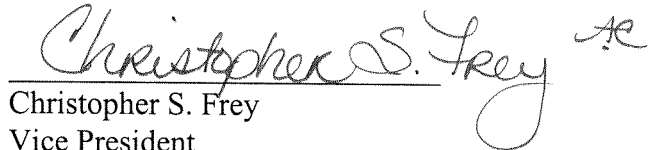
Mitch Landreth
Environmental Specialist

Inspector:



Lance Tomlin
Senior Project Manager

Reviewer:



Christopher S. Frey
Vice President

Address: 8600 W. 110th Street, Suite 120
Overland Park, Kansas 66210
Tel: (913) 338-APEX Fax: (913) 338-2741
e-mail: LTomlin@4apex.com

1.0 EXECUTIVE SUMMARY

On May 21 to June 3, 2003, APEX Environmental Consultants (APEX), Inc. conducted surveys for asbestos-containing materials (ACM) and lead-based paint (LBP) at the USDB Castle, Building 475 located at Fort Leavenworth, Kansas. Lance Tomlin and Mitch Landreth of APEX performed the surveys. Mr. Tomlin's Kansas Department of Health and Environment Lead Risk Assessor Certification Number is KS00-4010. Mr. Tomlin's EPA Asbestos Inspector Certification Number is 7ME01227501IR011. Mr. Landreth's Kansas Department of Health and Environment Lead Inspector Certification Number is KS00-3025. Mr. Landreth's EPA Asbestos Inspector Certification Number is 7ME12047404IR031. Copies of these certifications are included in Appendix V.

The intent of the ACM survey was to positively identify ACM in the buildings. The purpose of the LBP survey was to conduct a surface-by-surface investigation of painted components inside and outside of the buildings in an effort to identify which painted surfaces contain lead. Such information includes locations and quantities of known ACM and LBP. This report has been compiled for Bibb and Associates, Inc. based on the authorization of Phil Peterson, Project Manager.

2.0 ACM & LBP SURVEY METHODOLOGY

Asbestos-Containing Materials

The asbestos survey of the facilities was performed in accordance with the Environmental Protection Agency's (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAP), (ref: 40 CFR, Part 61), utilizing the AHERA assessment, sampling, and analytical protocols (ref: 40 CFR 763). No previous survey information was available for review.

Suspect materials were grouped together into homogeneous sampling areas. A homogeneous sampling area contains material that is uniform in texture and color and appears to be identical in every other respect. Building materials that were installed at different times or that do not appear to be similar in any other way are considered separate homogeneous materials/areas.

Bulk samples were collected of suspect ACM in order to determine the presence of asbestos. The bulk samples were sent to Schneider Laboratories, an independent NVLAP-accredited laboratory, for analysis. The samples were analyzed using polarized light microscopy (PLM) coupled with dispersion staining techniques in accordance with Appendix A to Subpart F of 40 CFR Part 763 (1982). For your information, the EPA considers a material to be asbestos-containing if it contains greater than one percent (1%) asbestos fibers. OSHA regulations cover materials containing asbestos in any concentration. Please refer to the bulk sample analytical data found in Appendix II of this report.

The EPA considers the following materials to be non-suspect ACM, and consequently, they were not sampled:

- Glass
- Metal
- Concrete
- Brick
- Fiberglass
- Rubber
- Foam

The data contained in this report has been compiled based upon visible and accessible materials. Without complete access to all walls/pipe chases and ceiling cavities, 100% accuracy in the following data is not possible. Please note that the abatement cost estimate allows for a 15% contingency, in the event that additional ACM is discovered, as previously hidden areas become accessible during the demolition process.

Lead-Based Paint

Interior and exterior areas of the USDB Castle, Building 475 were surveyed to determine the presence of lead in paint. Accessible areas of the buildings were inspected to determine homogeneous areas of paint. The testing was accomplished through the use of a portable RMD LPA-1 Spectrum Analyzer. This device utilizes x-ray fluorescence (XRF) technology and is fully accepted and recommended by the Department of Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA) for lead testing operations. Through XRF technology, HUD and EPA consider a surface coating to be lead-containing (or positive) if the concentration of lead is equal to or greater than 1.0 mg/cm².

Field validation checks of the XRF were also performed at the beginning and end of testing operations on the day of testing. Validation checks were performed through a series of three tests on a paint film standard. Results of the validation checks indicated that the XRF unit was calibrated properly.

3.0 RESULTS OF SURVEYS

Asbestos Containing Materials

A total of 57 bulk samples were collected from suspect ACM during the survey. Analytical data indicates that the following suspect materials tested *positive* for asbestos:

- Eight types of Floor Tile and Mastic;
- One type of Acoustical Tile with Glue;
- Black Tar Pipe Wrap; and,
- Mag Block Pipe Insulation.

The following materials were *assumed* to contain asbestos:

- Fire Doors;
- Roof Deck and Flashing;
- Electrical Wiring; and,
- Heat Reflectors.

The following suspect materials tested *negative* for asbestos:

- Five types of Ceiling Tiles;
- One type of Acoustical Tile and Glue;
- Gypsum Wallboard with Joint Compound;
- Three types of Cove Base with Glue;
- Hard Wall and Ceiling Plaster;
- Seven types of Floor Tile with Mastic;
- Mudded Joints on Fiberglass Pipe Insulation;
- Mag Block Pipe Insulation on Hangers;
- Tank Insulation Residue under replacement fiberglass;
- Debris in the Pipe Corridor Trench;
- Linoleum;
- Cementitious Fireproofing;
- White Pipe Mastic; and,
- Window Glazing Compound.

Please refer to the ACM inventory spreadsheet, located in Appendix I, which lists the specific locations and quantities for ACM in the USDB Castle, Building 475.

Lead Based Paint

A total of 456 assays (tests) were taken during the LBP survey, including the calibration checks. Of these 456 assays, 175 indicated a level of lead equal to or greater than 1.0 mg/cm², the action level established by HUD and EPA. Based upon the data collected during the survey, lead based paint is present on most painted surfaces in the building. Exceptions are the cell gates, floors, and added materials, including the kitchen wings and walls added to the interior.

Please refer to the inspection report included as Appendix III for detailed results of the survey for the building. The lead inspection report is comprised of four sections:

- Sequential Report - lists results in order of testing;
- Summary Report - only lists results where paint tested positive for lead;
- Detailed Report - lists the results on a room-by-room and an area-by-area basis; and,
- Distribution Report - lists percentage of results that tested positive, negative, and inconclusive for lead.

4.0 RECOMMENDATIONS

Due to multiple federal and State of Kansas regulations governing the disturbance, employee exposure, and disposal of ACM and LBP, APEX recommends that all ACM and LBP be properly addressed prior to the start of demolition activities. A KDHE-licensed asbestos abatement contractor should remove all of the ACM that is designated for removal as part of the project.

Removal of the mag block pipe insulation is considered friable asbestos removal by the State of Kansas. A KDHE-licensed asbestos abatement contractor must perform all friable removal. Nonfriable ACM (all other materials found) may be removed by a general contractor; however, APEX recommends that a licensed abatement contractor perform the removal. Though KDHE does not require it, APEX recommends that a

modified containment be constructed for nonfriable removal, consisting simply of polyethylene critical barriers (over windows, doors, etc.), asbestos warning signs and barrier tape, pressure differential machines, and drop cloths.

Current federal and state regulations do not require abatement of lead-based paint. With the exception of child-occupied facilities, the State of Kansas does not currently have regulations regarding the disturbance and proper handling of LBP; however, federal (OSHA) regulations require that all painted surfaces be considered lead containing unless proven otherwise. When performing demolition or renovation work, employers must provide protection for their employees that is at least as stringent as the requirements specified in OSHA's Lead in Construction Standard 29 CFR 1926.62. Since most of the painted surfaces were tested during the lead survey, APEX recommends that a copy of the test results be provided to contractors bidding on the demolition work for informational purposes. Please note that if even one of the component types tested positive for lead, each of the remaining like components should be considered lead-containing and therefore should be addressed accordingly. Following removal of lead-based paint and/or lead-based paint coated components of the building, APEX recommends that the waste generated as a result of the removal be properly categorized prior to disposal through toxicity characterization leaching procedure (TCLP) sampling, performed in accordance with SW 846 protocol identified in EPA's RCRA regulations.

APPENDIX II

ASBESTOS MATERIAL SURVEY

Asbestos Materials Inventory							USDB Castle, Building 475 Ft. Leavenworth, Kansas			
Location	Level	Room/Area	Material	Size	Qty.	Units	Sample #	Comments		
1 Wing	Bsmt.	Southwest Room	Floor Tile & Mastic	9"	425	SF	34, 35	Green/White Interlaid, Under carpet.		
1 Wing	Bsmt.	Northwest Storage Room	Black Tar Pipe Wrap	<4"	18	LF	37			
1 Wing	Bsmt.	Southeast Room	Floor Tile & Mastic	12"	450	SF	38	Beige, Under carpet.		
1 Wing	Bsmt.	East Center Room	Floor Tile & Mastic	12"	250	SF	38	Beige, Under carpet.		
1 Wing	First	West Center Room	Floor Tile & Mastic	9"	210	SF	40	Green, Under carpet.		
1 Wing	First	Southwest Room	Floor Tile & Mastic	9"	300	SF	40	Green, Under carpet.		
1 Wing	First	Northeast Room	Floor Tile & Mastic	9"	125	SF	40	Green		
1 Wing	First	East Center Room	Floor Tile & Mastic	9"	210	SF	40	Green		
1 Wing	First	Southeast Room	Floor Tile & Mastic	9"	300	SF	40	Green		
1 Wing	Second	West Center Room	Floor Tile & Mastic	9"	300	SF	34, 35	Green/White Interlaid, Under carpet.		
1 Wing	Second	South Room (Chapel)	Floor Tile & Mastic	9"	1,200	SF	34, 35	Green/White Interlaid, Under carpet.		
1 Wing	Second	East Center Room	Floor Tile & Mastic	9"	300	SF	34, 35	Green/White Interlaid, Under carpet.		
1 Wing	Second	Northeast Room	Floor Tile & Mastic	9"	280	SF	34, 35	Green/White Interlaid, Under carpet.		
1 Wing	Third	South Rooms	Floor Tile & Mastic	9"	1,000	SF	34, 35	Green/White Interlaid		
1 Wing	Fourth	Northeast Room	Floor Tile & Mastic	9"	300	SF	44	Tan		
1 Wing	Fourth	East Center Room	Floor Tile & Mastic	9"	480	SF	44	Tan		
1 Wing	Fourth	East Center Room	Acoustical Tile w/ Glue	1'	750	SF	45	Rows of Holes		
1 Wing	Fourth	Southeast Room	Floor Tile & Mastic	9"	480	SF	44	Tan		
1 Wing	Fourth	Southeast Room	Acoustical Tile w/ Glue	1'	750	SF	45	Rows of Holes		
2 Wing	Second	Chapel (South Room)	Floor Tile & Mastic	9"	1,600	SF	34, 35	Green/White Interlaid, Under carpet.		
5 Wing	2Subsmt.	East Stairwell	Fire Door		2	EA	Assumed			
5 Wing	2Subsmt.	East Storage Room	Fire Door		1	EA	Assumed			
5 Wing	2Subsmt.	Center Fan Room	Fire Door		1	EA	Assumed			
5 Wing	2Subsmt.	East Air Duct Passage	Fire Door		1	EA	Assumed			
5 Wing	2Subsmt.	East Air Shaft	Fire Door		1	EA	Assumed			
5 Wing	2Subsmt.	Tunnel #5, Upper Level	Mag Block Pipe Insulation 20"- 24"		12	LF	12, 13			
5 Wing	2Subsmt.	Tunnel #5, Lower Level	Mag Block Pipe Insulation 20"- 24"		6	LF	12, 13			
5 Wing	2Subsmt.	Tunnel to Power Plant	Mag Block Pipe Insulation 10"- 12"		100	LF	Assumed			
5 Wing	Subsmt.	Northeast Stairwell	Fire Door		2	EA	Assumed			
5 Wing	Subsmt.	East HVAC Room	Fire Door		1	EA	Assumed			
5 Wing	Subsmt.	East Hall	Fire Door		3	EA	Assumed			

Asbestos Materials Inventory							USDB Castle, Building 475 Ft. Leavenworth, Kansas		
Location	Level	Room/Area	Material	Size	Qty.	Units	Sample #	Comments	
5 Wing	Subbsmt.	Janitor's Room	Fire Door		1	EA	Assumed		
5 Wing	Subbsmt.	FSD (North) Office	Fire Door		1	EA	Assumed		
5 Wing	Subbsmt.	Conference Room	Fire Door		1	EA	Assumed		
5 Wing	Subbsmt.	North Hall	Fire Door		2	EA	Assumed		
5 Wing	Subbsmt.	Northwest Storage Room	Fire Door		1	EA	Assumed		
5 Wing	Subbsmt.	Northwest Stairwell	Fire Door		1	EA	Assumed		
5 Wing	Subbsmt.	Northwest Elevator Area	Fire Door		2	EA	Assumed		
5 Wing	Subbsmt.	Mail (Southwest) Room	Fire Door		1	EA	Assumed		
5 Wing	Bsmt.	Weight Room	Fire Door		2	EA	Assumed		
5 Wing	Bsmt.	Library, Law Annex	Fire Door		1	EA	Assumed		
5 Wing	Bsmt.	Northeast Stairwell	Fire Door		2	EA	Assumed		
5 Wing	Bsmt.	West Storage Room	Fire Door		1	EA	Assumed		
5 Wing	Bsmt.	Rations Room	Fire Door		1	EA	Assumed		
5 Wing	Bsmt.	Northwest Stairwell	Fire Door		1	EA	Assumed		
5 Wing	Bsmt.	Northwest Elevator Area	Fire Door		2	EA	Assumed		
5 Wing	First	Northwest Stairwell	Fire Door		1	EA	Assumed		
5 Wing	First	Northwest Elevator Area	Fire Door		2	EA	Assumed		
5 Wing	First	Northeast Stairwell	Fire Door		2	EA	Assumed		
5 Wing	Second	Stage, North Rooms	Floor Tile & Mastic	9"	525	SF	28	Tan	
5 Wing	Fourth	Projection Booth	Floor Tile & Mastic	9"	290	SF	32	White w/ Black Streaks	
5 Wing	Fourth	Projection Booth	Electrical Wiring		30	LF	Assumed	On Projectors	
5 Wing	Fourth	Projection Booth	Heat Reflectors		2	SF	Assumed	Inside Projectors	
8 Wing	Bsmt.	Northeast Cell	Fire Door		1	EA	Assumed		
8 Wing	First	Southwest Rooms	Floor Tile & Mastic	9"	380	SF	34, 35	Green/White Interlaid, Under carpet.	
8 Wing	First	Southeast Rooms	Floor Tile & Mastic	12"	350	SF	50	Beige w/ Tan Specks, Under carpet.	
8 Wing	Second	Throughout	Floor Tile & Mastic	9"	1,500	SF	28	Tan, Under carpet.	
W. Kitchen Add.	Subbsmt.	Storage Room	Fire Door		1	EA	Assumed		
W. Kitchen Add.	Subbsmt.	Stairwell	Fire Door		1	EA	Assumed		
W. Kitchen Add.	Subbsmt.	Elevator Room	Fire Door		1	EA	Assumed		
W. Kitchen Add.	Subbsmt.	Refrigerator Room	Fire Door		2	EA	Assumed		
E. Kitchen Add.	Subbsmt.	Storage Room	Fire Door		1	EA	Assumed		

Asbestos Materials Inventory					USDB Castle, Building 475 Ft. Leavenworth, Kansas				
Location	Level	Room/Area	Material	Size	Qty.	Units	Sample #	Comments	
E. Kitchen Add.	Subbsmt.	Stairwell	Fire Door		1	EA	Assumed		
E. Kitchen Add.	Subbsmt.	Elevator Room	Fire Door		1	EA	Assumed		
E. Kitchen Add.	Subbsmt.	Refrigerator Room	Fire Door		2	EA	Assumed		
Rotunda	Bsmt.	Electrical Room	Fire Door		1	EA	Assumed		
Exterior	Roof	Throughout	Roof Deck and Flashing		76,000	SF	Assumed		

APPENDIX III
ASBESTOS BULK SAMPLE RESULTS

COPY



APEX ENVIRONMENTAL CONSULTANTS, INC.

8600 W. 110th Street • Overland Park, Kansas 66210 • (913) 338-2739 • FAX (913) 338-2741

BULK SAMPLE CUSTODY FORM

CLIENT: Bibb and Associates, Inc.

JOB LOCATION: Building 475-USDB Castle
Ft. Leavenworth, Kansas

PROJECT No: 30213E

CONTACT/PHONE: Lance Tomlin (913) 338-2739

Lab No. 1899

DATE	SAMPLE #	LOCATION	MATERIAL	COMMENTS
5-30-03	001	8 Wing Bsmt. Lethal injection drug store rm.	Floor tile and mastic	12"x12" Tan/Brown Fleck
5/30/03	002	8 Wing Bsmt. Lethal injecton room	Ceiling Tile	2'x4' Dots/Fissures
5/30/03	003	SubBsmt. Pipe Corridor South Side	Mudded Hanger	24" Line
5/30/03	004	SubBsmt Pipe Corridor North Side	Mudded Hanger	24" Line
5/30/03	005	SubBsmt Pipe Corridor East Side	Mudded Hanger	24"Line
5/30/03	006	Tunnel #5 Adjacent Entrance	Block Pipe Insulation	12" Line
5/30/03	007	Tunnel #5 Center of Tunnel	Block Pipe Insulation	12" Line
5/30/03	008	SubBsmt. Pipe Corridor East End of Tank	Tank Insulation	Residue on tank under fiberglass
5/30/03	009	SubBsmt. Pipe Corridor Center of Tank	Tank Insulation	Residue on tank under fiberglass
5/30/03	010	SubBsmt. Pipe Corridor West End of Tank	Tank Insulation	Residue on tank under fiberglass

ADDITIONAL REMARKS:

- Please put project number on report.
- Requested Analysis – PLM-DS
- Fax results to (913) 338-2741

SAMPLED BY:

MITCH LANDRETH

PRINTED NAME

TURNAROUND TIME: 24 Hour

Mitch Landreth
SIGNATURE

CUSTODY

Relinquished By: Mitch Landreth

Date: 6/4/03

Received By: _____

Date: _____

PLEASE RETURN ORIGINAL TO APEX ENVIRONMENTAL CONSULTANTS, INC.



APEX ENVIRONMENTAL CONSULTANTS, INC.

8600 W. 110th Street • Overland Park, Kansas 66210 • (913) 338-2739 • FAX (913) 338-2741

BULK SAMPLE CUSTODY FORM

CLIENT: Bibb and Associates, Inc.

JOB LOCATION: Building 475-USDB Castle
Ft. Leavenworth, Kansas

PROJECT No: 30213E

CONTACT/PHONE: Lance Tomlin (913) 338-2739

Lab No. 1899

DATE	SAMPLE #	LOCATION	MATERIAL	COMMENTS
5-30-03	011	SubBsm. Pipe Corridor Pipe Trench S. Side	Debris	Loose on floor of trench
5/30/03	012	SubBsm. Tunnel #5 Upper Tunnel	Mag Pipe Insulation	24" Line
5/30/03	013	SubBsm. Tunnel #5 Tunnel	Mag Pipe Insulation	24" Line
5/30/03	014	5 Wing Power Plant Tunnel	Block Pipe Insulation	24" Line
5/30/03	015	5 Wing SubBsm., North Center Rooms	Cove Base and Mastic	4" Gray
5/30/03	016	5 Wing SubBsm., North Center Rooms	Drywall & Joint Compound	Analyze as a composite
5/30/03	017	5 Wing SubBsm. H&C Warehouse N. Side	Fireproofing	I-Beam at Ceiling
5/30/03	018	5 Wing SubBsm. H&C Warehouse Center	Fireproofing	I-Beam at Ceiling
6/2/03	19	5 Wing, SubBsm., Mail Rm., S. End. Center	Fireproofing	
6/2/03	20	5 Wing, SB., SW Rm., S. End. Center	Fireproofing	

ADDITIONAL REMARKS:

- Please put project number on report.
- Requested Analysis – PLM-DS
- Fax results to (913) 338-2741

SAMPLED BY:

MITCH LANDRETH
PRINTED NAME

TURNAROUND TIME: 24 Hour

Mitch Landreth
SIGNATURE

CUSTODY

Relinquished By: Mitch Landreth

Date: 6/4/03

Received By: _____

Date: _____

PLEASE RETURN ORIGINAL TO APEX ENVIRONMENTAL CONSULTANTS, INC.

COPY



APEX ENVIRONMENTAL CONSULTANTS, INC.

8600 W. 110th Street • Overland Park, Kansas 66210 • (913) 338-2739 • FAX (913) 338-2741

BULK SAMPLE CUSTODY FORM

CLIENT: Bibb and Associates, Inc.

JOB LOCATION: Building 475-USDB Castle
Ft. Leavenworth, Kansas

PROJECT No: 30213E

CONTACT/PHONE: Lance Tomlin (913) 338-2739

Lab No. 1899

DATE	SAMPLE #	LOCATION	MATERIAL	COMMENTS
6/2/03	21	5 Wing, Basement, Weight Rm., Center	Fireproofing	
6/2/03	22	5 Wing, Basement, Library, W. Side, Center	Fireproofing	
6/2/03	23	5 Wing, Basement, Law Library, SE Corner	Fireproofing	
6/2/03	24	5 Wing, SB, N. Mech. Rm., SE Corner	White Pipe Mastic	
6/2/03	25	5 Wing, SB, N. Mech. Rm., North Tank	Block Tank Insulation	
6/2/03	26	5 Wing, 1 st , Kitchen Inmate Latrine. Bv Door	Floor Tile and Mastic	12" Beige
6/2/03	27	5 Wing, 1 st , Kitchen Inmate Latrine. Bv Door	Cove Base and Glue	4" Black
6/2/03	28	5 Wing, 2 nd , Stage, N. Center Rm., At Door	Floor Tile and Mastic	9" Tan
6/2/03	29	5 Wing, 2 nd , Stage, N. Center Rm., SW Corner	Acoustical Tile and Glue	1' w/ Fissures
6/2/03	30	5 Wing, 2 nd , Stage, N. Center Rm., SW Corner	Ceiling Tile	2'x 4' Wormholes Parallel to Length

ADDITIONAL REMARKS:

- Please put project number on report.
- Requested Analysis – PLM-DS
- Fax results to (913) 338-2741

TURNAROUND TIME: 24 Hour

SAMPLED BY:

Lance Tomlin

PRINTED NAME

Lance Tomlin

SIGNATURE

Relinquished By:

Lance Tomlin

CUSTODY

Date:

6/4/03

Received By:

Date:

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8600 W. 110th Street • Overland Park, Kansas 66210 • (913) 338-2739 • FAX (913) 338-2741

BULK SAMPLE CUSTODY FORM

CLIENT: Bibb and Associates, Inc.

JOB LOCATION: Building 475-USDB Castle
Ft. Leavenworth, Kansas

PROJECT No: 30213E

CONTACT/PHONE: Lance Tomlin (913) 338-2739

Lab No. 1899

DATE	SAMPLE #	LOCATION	MATERIAL	COMMENTS
6/2/03	31	5 Wing, 2 nd , Stage, N. Center Rm., NW Corner	Gypsum Wallboard	Analyze as composite
6/2/03	32	5 Wing, 4 th , Projection Booth, At Door	Floor Tile and Mastic	9" White w/ Black
6/2/03	33	5 Wing, 4 th , Projection Booth, E. Side	Window Glazing Compound	
6/2/03	34	1 Wing, Bsmt., SW Rm., N. Side	Floor Tile and Mastic	9" Green
6/2/03	35	1 Wing, Bsmt., SW Rm., N. Side	Floor Tile and Mastic	9" White
6/2/03	36	1 Wing, Bsmt., West Center Rm. NE Corner	Floor Tile and Mastic	12" White w/ Brown Streaks
6/2/03	37	1 Wing, Bsmt., NW Stor. Rm., NW Corner	Black Tar Pipe Wrap	
6/2/03	38	1 Wing, Bsmt., East Center Rm. NW Corner	Floor Tile and Mastic	12" Beige
6/2/03	39	1 Wing, 1 st , NE Latrine, Near Door	Floor Tile and Mastic	12" White w/ Tile Pattern
6/2/03	40	1 Wing, 1 st , West Center Rm. SE Corner	Floor Tile and Mastic	9" Green

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TURNAROUND TIME: 24 Hour

SAMPLED BY:

Lance Tomlin

PRINTED NAME

Lance Tomlin

SIGNATURE

CUSTODY

Relinquished By: *Lance Tomlin*

Date: 6/4/03

Received By: _____

Date: _____

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BULK SAMPLE CUSTODY FORM

CLIENT: Bibb and Associates, Inc.

JOB LOCATION: Building 475-USDB Castle
Ft. Leavenworth, Kansas

PROJECT No: 30213E

CONTACT/PHONE: Lance Tomlin (913) 338-2739

Lab No. 1899

DATE	SAMPLE #	LOCATION	MATERIAL	COMMENTS
6/2/03	41	1 Wing, 1 st , West Center Rm. NE Corner	Hard Wall Plaster	
6/3/03	42	1 Wing, 3 rd , NE Room, At Door	Linoleum	Brown
6/3/03	43	1 Wing, 3 rd , SW Room, W. Wall, By Window	Hard Wall Plaster	
6/3/03	44	1 Wing, 4 th , NE Room, At Door	Floor Tile and Mastic	9" Tan
6/3/03	45	1 Wing, 4 th , E. Center Room. At Door	Acoustical Tile and Glur	1' w/ Rows of Holes
6/3/03	46	1 Wing, 4 th , SW Room, NW Corner	Hard Ceiling Plaster	
6/3/03	47	2 Wing, 1 st , S. Rm., At Door	Floor Tile and Mastic	12" Dark Blue
6/3/03	48	2 Wing, 2 nd , Chapel, SE Corner	Ceiling Tile	2'x 4' w/ Fissures Pernendicular to Length
6/3/03	49	8 Wing, 4 th , S. Rm., S. Side. Center	Ceiling Tile	2'x 4' w/ Wormholes Parallel to Length
6/3/03	50	8 Wing, 1 st , SE Rm., Center	Floor Tile and Mastic	12" Beige w/ Tan Specks

ADDITIONAL REMARKS:

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TURNAROUND TIME: 24 Hour

SAMPLED BY:

Lance Tomlin

PRINTED NAME

Lance Tomlin

SIGNATURE

Relinquished By: *Lance Tomlin* CUSTODY

Date: *6/4/03*

Received By: _____

Date: _____

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8600 W. 110th Street • Overland Park, Kansas 66210 • (913) 338-2739 • FAX (913) 338-2741

BULK SAMPLE CUSTODY FORM

CLIENT: Bibb and Associates, Inc.

JOB LOCATION: Building 475-USDB Castle
Ft. Leavenworth, Kansas

PROJECT No: 30213E

CONTACT/PHONE: Lance Tomlin (913) 338-2739 Lab No. 1899

DATE	SAMPLE #	LOCATION	MATERIAL	COMMENTS
6/3/03	51	8 Wing, 1 st , SE Rm., Center	Gypsum Wallboard	Analyze as composite
6/3/03	52	8 Wing, SB, SE Rm., At W. Door To Hall	Floor Tile and Mastic	12" Gray and White
6/3/03	53	3 Wing, SB (1 Base), W. End, N. Window	Window Glazing Compound	
6/3/03	54	W. Kitchen Add., SB, Mech. Rm., Center	White Pipe Mastic	
6/3/03	55	W. Kitchen Add., 1 st , Kitchen, W. Side	Ceiling Tile	2'x 2' w/ Holes
6/3/03	56	5 Wing SubBsm. Center Offices	12"x12" Floor Tile and Mastic	Grey/Flecks
6/3/03	57	5 Wing SubBsm. Center Offices	Cove Base and Mastic	4" Gray

ADDITIONAL REMARKS:

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- Requested Analysis – PLM-DS
- Fax results to (913) 338-2741

TURNAROUND TIME: 24 Hour

SAMPLED BY:

Lance Tomlin

PRINTED NAME

Lance Tomlin

SIGNATURE

CUSTODY

Relinquished By: Lance Tomlin

Date: 6/4/03

Received By: _____

Date: _____

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LABORATORY ANALYSIS REPORT

Asbestos Identification by EPA Method 600/R-93/116

ACCOUNT: 1899-03-916
CLIENT: Apex Environmental Consultants, Inc.
ADDRESS: 8600 W 110th St Ste 120
Overland Park, KS 66210-1805
PO NO.:
PROJECT NAME: Bldg. 475-USDB
PROJECT NO.: 30213E
JOB LOCATION: Ft. Leavenworth, KS

DATE COLLECTED: 05/30/2003
DATE RECEIVED: 06/05/2003
DATE ANALYZED: 06/05/2003
DATE REPORTED: 06/06/2003

Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
001	26794476	8 wing bsmt Layer 1: Floor Tile 100% Non-Asbestos	No	Tan, Organically Bound CELLULOSE FIBER 3%, NON FIBROUS MATERIAL 97%
		Layer 2: Mastic 100% Non-Asbestos	No	Tan, Brittle NON FIBROUS MATERIAL 100%
		Layer 3: Leveling Compound 100% Non-Asbestos	No	White, Granular CELLULOSE FIBER 1%, NON FIBROUS MATERIAL 99%
002	26794477	8 wing bsmt Layer 1: Ceiling Tile 100% Non-Asbestos	No	White, Fibrous CELLULOSE FIBER 45%, FOAMED GLASS 10%, MINERAL/GLASS WOOL 35%, NON FIBROUS MATERIAL 10%
003	26794478	Sub-bsmt S Layer 1: Insulation Mud 100% Non-Asbestos	No	Gray, Fibrous CELLULOSE FIBER 5%, MINERAL/GLASS WOOL 35%, NON FIBROUS MATERIAL 60%
004	26794479	Sub-bsmt N Layer 1: Insulation Mud 100% Non-Asbestos	No	White, Fibrous CELLULOSE FIBER 5%, MINERAL/GLASS WOOL 40%, NON FIBROUS MATERIAL 55%

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ACCOUNT - WORKORDER: 1899-03-916

Page 2 (Continued)

Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
005	26794480 Layer 1: 100% Non-Asbestos	Sub-bsmt E Insulation Mud	No	Gray, Fibrous CELLULOSE FIBER 5%, MINERAL/GLASS WOOL 40%, NON FIBROUS MATERIAL 55%
006	26794481 Layer 1: 100% Non-Asbestos	Tunnel #5 adj entr Block Insulation	No	White, Powdery NON FIBROUS MATERIAL 80%, SYNTHETIC FIBER 20%
007	26794482 Layer 1: 100% Non-Asbestos	Tunnel #5 ctr Block Insulation	No	White, Powdery NON FIBROUS MATERIAL 80%, SYNTHETIC FIBER 20%
008	26794483 Layer 1: 100% Non-Asbestos	Sub-bsmt E Insulation Mud	No	Gray, Granular CELLULOSE FIBER 5%, MINERAL/GLASS WOOL 20%, NON FIBROUS MATERIAL 75%
009	26794484 Layer 1: 100% Non-Asbestos	Sub-bsmt ctr Insulation Muds	No	White/Brown, Powdery, Granular MINERAL/GLASS WOOL 5%, NON FIBROUS MATERIAL 90%, SYNTHETIC FIBER 5% <i>Unable to separate individual layers.</i>
010	26794485 Layer 1: 100% Non-Asbestos	Sub-bsmt W Insulation Mud	No	Gray, Fibrous CELLULOSE FIBER 5%, MINERAL/GLASS WOOL 40%, NON FIBROUS MATERIAL 55%
011	26794486 Layer 1: 100% Non-Asbestos	Sub-bsmt S Debris	No	Gray, Granular CELLULOSE FIBER 5%, MINERAL/GLASS WOOL 20%, NON FIBROUS MATERIAL 75%
012	26794487 Layer 1: 35% Asbestos 65% Non-Asbestos	Sub-bsmt upper Insulation	Yes	White, Fibrous AMOSITE 5%, CHRYSOTILE 30% NON FIBROUS MATERIAL 65%
013	26794488 Layer 1: 35% Asbestos 65% Non-Asbestos	Sub-bsmt #5 Insulation	Yes	White, Fibrous AMOSITE 5%, CHRYSOTILE 30% NON FIBROUS MATERIAL 65%

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ACCOUNT - WORKORDER: 1899-03-916

Page 3 (Continued)

Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
014	26794489 Layer 1: 100% Non-Asbestos	5 wing pwr plnt Block Insulation	No	White, Powdery MINERAL/GLASS WOOL 15%, NON FIBROUS MATERIAL 75%, SYNTHETIC FIBER 10%
015	26794490 Layer 1: 100% Non-Asbestos	5 wing sub-bsmt N Covebase	No	Brown, Soft NON FIBROUS MATERIAL 100%
	Layer 2: 100% Non-Asbestos	Mastic	No	Yellow, Soft CELLULOSE FIBER 5%, NON FIBROUS MATERIAL 95%
016	26794491 Layer 1: 100% Non-Asbestos	5 wing sub-bsmt N Drywall/Joint Cmpd	No	White, Powdery, Granular CELLULOSE FIBER 3%, NON FIBROUS MATERIAL 97%
017	26794492 Layer 1: 100% Non-Asbestos	5 wing sub-bsmt N Fireproofing	No	Gray, Cementitious NON FIBROUS MATERIAL 100%
018	26794493 Layer 1: 100% Non-Asbestos	5 wing sub-bsmt ctr Fireproofing	No	Gray, Cementitious NON FIBROUS MATERIAL 100%
019	26794494 Layer 1: 100% Non-Asbestos	5 wing sub-bsmt S Fireproofing	No	Gray, Cementitious NON FIBROUS MATERIAL 100%
020	26794495 Layer 1: 100% Non-Asbestos	5 wing SW S ctr Fireproofing	No	Gray, Cementitious NON FIBROUS MATERIAL 100%
021	26794496 Layer 1: 100% Non-Asbestos	5 wing bsmt ctr Fireproofing	No	Gray, Cementitious NON FIBROUS MATERIAL 100%
022	26794497 Layer 1: 100% Non-Asbestos	5 wing W ctr Fireproofing	No	Gray, Cementitious CELLULOSE FIBER < 1%, NON FIBROUS MATERIAL 100%

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ACCOUNT - WORKORDER: 1899-03-916

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Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
023	26794498	5 wing bsmt SE Layer 1: Fireproofing 100% Non-Asbestos	No	Gray, Cementitious CELLULOSE FIBER 1%, NON FIBROUS MATERIAL 99%
024	26794499	5 wing SE corner Layer 1: Pipe Mastic 100% Non-Asbestos Layer 2: Fibrous Material 100% Non-Asbestos	No No	White, Soft CELLULOSE FIBER 5%, NON FIBROUS MATERIAL 95% Yellow, Fibrous CELLULOSE FIBER 5%, MINERAL/GLASS WOOL 92%, NON FIBROUS MATERIAL 3%
025	26794500	5 wing N tank Layer 1: Block Insulation 100% Non-Asbestos	No	Yellow, Powdery CELLULOSE FIBER 15%, NON FIBROUS MATERIAL 85%
026	26794501	5 wing 1st kitchen Layer 1: Floor Tile 100% Non-Asbestos Layer 2: Mastics 100% Non-Asbestos Unable to separate individual layers.	No No	Beige, Organically Bound NON FIBROUS MATERIAL 100% Gray/Black, Soft, Bituminous CELLULOSE FIBER 10%, NON FIBROUS MATERIAL 90%
027	26794502	5 wing 1st kitchen Layer 1: Covebase 100% Non-Asbestos Layer 2: Glue 100% Non-Asbestos	No No	Black, Soft NON FIBROUS MATERIAL 100% White, Soft CELLULOSE FIBER < 1%, NON FIBROUS MATERIAL 100%
028	26794503	5 wing 2nd stage N Layer 1: Floor Tile 5% Asbestos 95% Non-Asbestos Layer 2: Mastic 100% Non-Asbestos	Yes No	Tan, Organically Bound CHRYSTOTILE 5% NON FIBROUS MATERIAL 95% Black, Bituminous CELLULOSE FIBER 10%, NON FIBROUS MATERIAL 90%
029	26794504	5 wing 2nd stage N Layer 1: Ceiling Tile 100% Non-Asbestos	No	White, Fibrous CELLULOSE FIBER 5%, MINERAL/GLASS WOOL 70%, NON FIBROUS MATERIAL 25%

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ACCOUNT - WORKORDER: 1899-03-916

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Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
	Layer 2: 100% Non-Asbestos	Glue	No	Brown, Brittle CELLULOSE FIBER 5%, NON FIBROUS MATERIAL 95%
030	26794505 Layer 1: 100% Non-Asbestos	5 wing 2nd stage N Ceiling Tile	No	White, Fibrous CELLULOSE FIBER 55%, FOAMED GLASS 10%, MINERAL/GLASS WOOL 20%, NON FIBROUS MATERIAL 15%
031	26794506 Layer 1: < 1% (Trace) Asbestos 100% Non-Asbestos	5 wing 2nd stage N Wallboard/Joint Cmpd	Yes	White, Powdery, Granular CHRYSTOTILE < 1% CELLULOSE FIBER 4%, NON FIBROUS MATERIAL 96%
032	26794507 Layer 1: 7% Asbestos 93% Non-Asbestos Layer 2: 100% Non-Asbestos	5 wing 4th @dr Floor Tile	Yes No	White, Organically Bound CHRYSTOTILE 7% NON FIBROUS MATERIAL 93% Black, Bituminous CELLULOSE FIBER 5%, NON FIBROUS MATERIAL 95%
033	26794508 Layer 1: 100% Non-Asbestos	5 wing 4th E side Glazing	No	Red, Brittle NON FIBROUS MATERIAL 100%
034	26794509 Layer 1: 4% Asbestos 96% Non-Asbestos Layer 2: 3% Asbestos 97% Non-Asbestos	1 wing bsmt SW rm N Floor Tile	Yes Yes	Green, Organically Bound CHRYSTOTILE 4% CELLULOSE FIBER 1%, NON FIBROUS MATERIAL 95% Gray, Brittle CHRYSTOTILE 3% CELLULOSE FIBER 2%, NON FIBROUS MATERIAL 95%
035	26794510 Layer 1: 7% Asbestos 93% Non-Asbestos Layer 2: 100% Non-Asbestos	1 wing bsmt SW rm N Floor Tile	Yes No	White, Organically Bound CHRYSTOTILE 7% NON FIBROUS MATERIAL 93% Red, Brittle CELLULOSE FIBER 3%, MINERAL/GLASS WOOL 1%, NON FIBROUS MATERIAL 96%

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Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
036	26794511	1 wing bsmt W ctr		
	Layer 1:	Floor Tile	No	White, Organically Bound
	100% Non-Asbestos			NON FIBROUS MATERIAL 100%
	Layer 2:	Mastics	No	Yellow/Black, Brittle, Bituminous
	100% Non-Asbestos			CELLULOSE FIBER 3%, NON FIBROUS MATERIAL 97%
	Unable to separate individual layers.			
037	26794512	1 wing bsmt NW		
	Layer 1:	Pipe Wrap	Yes	Brown, Soft
	20% Asbestos			CHRYSTILE 20%
	80% Non-Asbestos			CELLULOSE FIBER 5%, NON FIBROUS MATERIAL 75%
038	26794513	1 wing bsmt E ctr		
	Layer 1:	Mastic	No	Tan, Soft
	100% Non-Asbestos			CELLULOSE FIBER 2%, NON FIBROUS MATERIAL 98%
	Layer 2:	Floor Tile	Yes	Beige, Organically Bound
	5% Asbestos			CHRYSTILE 5%
	95% Non-Asbestos			NON FIBROUS MATERIAL 95%
	Layer 3:	Mastic	Yes	Black, Bituminous
	8% Asbestos			CHRYSTILE 8%
	92% Non-Asbestos			NON FIBROUS MATERIAL 92%
039	26794514	1 wing 1st NE		
	Layer 1:	Floor Tile	No	White, Organically Bound
	100% Non-Asbestos			NON FIBROUS MATERIAL 100%
	Layer 2:	Mastic	Yes	Yellow, Soft
	< 1% (Trace) Asbestos			CHRYSTILE < 1%
	100% Non-Asbestos			CELLULOSE FIBER 5%, NON FIBROUS MATERIAL 95%
040	26794515	1 wing 1st W ctr		
	Layer 1:	Floor Tile	Yes	Green, Organically Bound
	6% Asbestos			CHRYSTILE 6%
	94% Non-Asbestos			NON FIBROUS MATERIAL 94%
	Layer 2:	Mastic	No	Black, Bituminous
	100% Non-Asbestos			CELLULOSE FIBER 4%, NON FIBROUS MATERIAL 96%
041	26794516	1 wing 1st W ctr		
	Layer 1:	Plaster	No	Tan, Granular
	100% Non-Asbestos			NON FIBROUS MATERIAL 100%

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Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
042	26794517	1 wing 3rd NE		
	Layer 1: 100% Non-Asbestos	Linoleum	No	Brown, Fibrous CELLULOSE FIBER 35%, NON FIBROUS MATERIAL 60%, SYNTHETIC FIBER 5%
043	26794518	1 wing 3rd SW		
	Layer 1: 100% Non-Asbestos	Basecoat	No	Gray, Cementitious CELLULOSE FIBER < 1%, NON FIBROUS MATERIAL 100%
044	26794519	1 wing 4th NE		
	Layer 1: 10% Asbestos 90% Non-Asbestos	Floor Tile	Yes	Tan, Organically Bound CHRYSTOTILE 10% NON FIBROUS MATERIAL 90%
045	26794520	1 wing 4th E ctr		
	Layer 1: 100% Non-Asbestos	Ceiling Tile	No	White, Fibrous CELLULOSE FIBER 96%, NON FIBROUS MATERIAL 4%
046	26794521	1 wing 4th SW		
	Layer 1: 100% Non-Asbestos	Basecoat	No	Gray, Cementitious CELLULOSE FIBER 2%, NON FIBROUS MATERIAL 98%
047	26794522	2 wing 1st S rm		
	Layer 1: 100% Non-Asbestos	Floor Tile	No	Blue, Organically Bound NON FIBROUS MATERIAL 100%
		Layer 2: 100% Non-Asbestos	No	Clear, Brittle CELLULOSE FIBER 5%, NON FIBROUS MATERIAL 95%

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Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
048	26794523	2 wing 2nd chapel Layer 1: Ceiling Tile 100% Non-Asbestos	No	White, Fibrous CELLULOSE FIBER 50%, FOAMED GLASS 10%, MINERAL/GLASS WOOL 35%, NON FIBROUS MATERIAL 5%
049	26794524	8 wing 4th S rm Layer 1: Ceiling Tile 100% Non-Asbestos	No	White, Fibrous CELLULOSE FIBER 50%, FOAMED GLASS 5%, MINERAL/GLASS WOOL 35%, NON FIBROUS MATERIAL 10%
050	26794525	8 wing 1st SE rm Layer 1: Mastic 100% Non-Asbestos Layer 2: Floor Tile 4% Asbestos 96% Non-Asbestos Layer 3: Mastic 10% Asbestos 90% Non-Asbestos	No Yes Yes	Tan, Soft CELLULOSE FIBER 3%, NON FIBROUS MATERIAL 97% Beige, Organically Bound CHRYSTILE 4% NON FIBROUS MATERIAL 96% Black, Bituminous CHRYSTILE 10% CELLULOSE FIBER 5%, NON FIBROUS MATERIAL 85%
051	26794526	8 wing 1st SE ctr Layer 1: Wallboard/Joint Cmpd 100% Non-Asbestos	No	White, Powdery, Granular CELLULOSE FIBER 4%, NON FIBROUS MATERIAL 96%
052	26794527	8 wing SE Layer 1: Floor Tile 100% Non-Asbestos Layer 2: Mastic 100% Non-Asbestos	No No	Gray, Organically Bound NON FIBROUS MATERIAL 100% Tan, Brittle CELLULOSE FIBER 5%, NON FIBROUS MATERIAL 95%
053	26794528	3 wing W end N Layer 1: Glazing 100% Non-Asbestos	No	White, Brittle CELLULOSE FIBER < 1%, NON FIBROUS MATERIAL 100%
054	26794529	W kitchen add ctr Layer 1: Pipe Mastic 100% Non-Asbestos Layer 2: Fibrous Material 100% Non-Asbestos	No No	White, Soft CELLULOSE FIBER 3%, MINERAL/GLASS WOOL 5%, NON FIBROUS MATERIAL 92% Yellow, Fibrous CELLULOSE FIBER 1%, MINERAL/GLASS WOOL 96%, NON FIBROUS MATERIAL 3%

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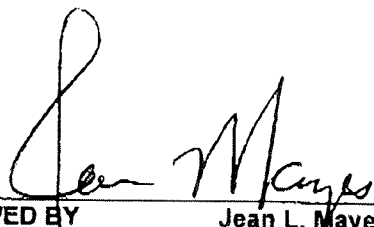
ACCOUNT - WORKORDER: 1899-03-916

Page 9 (Continued)

Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
055	26794530 Layer 1: 100% Non-Asbestos	W kitchen add 1st W Ceiling Tile	No	White, Fibrous CELLULOSE FIBER 50%, FOAMED GLASS 5%, MINERAL/GLASS WOOL 35%, NON FIBROUS MATERIAL 10%
056	26794531 Layer 1: 100% Non-Asbestos Layer 2: 100% Non-Asbestos Layer 3: 100% Non-Asbestos	5 wing sub-bsmt ctr Mastic Floor Tile Mastic	No No No	Tan, Soft CELLULOSE FIBER 3%, NON FIBROUS MATERIAL 97% Gray, Organically Bound NON FIBROUS MATERIAL 100% Black, Bituminous CELLULOSE FIBER 5%, NON FIBROUS MATERIAL 95%
057	26794532 Layer 1: 100% Non-Asbestos Layer 2: 100% Non-Asbestos	5 wing sub-bsmt ctr Covebase Mastic	No No	Gray, Soft NON FIBROUS MATERIAL 100% Yellow, Soft CELLULOSE FIBER 10%, NON FIBROUS MATERIAL 90%

ANALYST: CHRISTIAN SCHAIBLE
Total no. of pages in report = 9

REVIEWED BY


Jean L. Mayes, Supervisor

Samples analyzed by the EPA Test Method are subject to the inherent limitations of light microscopy including interference by matrix components. Gravimetric reduction and correlative analyses are recommended for all non-friable, organically bound materials. For calibrated visual estimate, 1% is the concentration at which there is a quantitative uncertainty. This report relates only to the items tested, must not be reproduced except in full with the approval of the lab, and must not be used to claim NVLAP or other government agency endorsement.

APPENDIX IV
LEAD-BASED PAINT SURVEY DATA

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/21/03 08:55

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
2 Wing

INSPECTION DATE: 05/21/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

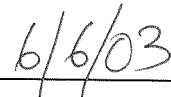
OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Ste. 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/21/03 USDB Castle, Building 475
 Report Date: 6/6/03 2 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/21/03 08:55
 Total Readings: 53
 Job Started: 05/21/03 08:55
 Job Finished: 05/21/03 15:22

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
1		CALIBRATION								1.1	TC
2		CALIBRATION								1.1	TC
3		CALIBRATION								1.0	TC
4	001	SB SW Room	A	Window		Rgt Sill	I	Concrete	Gray	1.0	QM
5	001	SB SW Room	A	Wall		U Ctr	I	Concrete	White	1.0	QM
6	001	SB SW Room	A	Wall		U Rgt	I	Drywall	White	0.0	QM
7	002	SB Pipe Cha	D	Wall		U Rgt	I	Brick	White	0.0	QM
8	002	SB Pipe Cha	D	Floor			I	Concrete	Gray	0.1	QM
9	003	SB SE Room	D	Cell Door		Rgt	I	Metal	Gray	-0.3	QM
10	004	SB NE Room	D	Ceiling			I	Concrete	White	0.5	QM
11	004	SB NE Room	D	Pipe		Lft	I	Metal	Red	1.0	QM
12	005	SB Stairwel	C	Wall		U Ctr	I	Concrete	White	0.1	QM
13	005	SB Stairwel	A	Stairs		Ctr Treads	I	Concrete	Gray	1.0	QM
14	005	SB Stairwel	B	Wall		L Ctr	I	Block	Red	0.1	QM
15	005	SB Stairwel	B	Gate		Ctr	I	Metal	Gray	2.7	QM
16	006	BSMT SE RM	A	Wall		U Ctr	I	Brick	White	0.4	QM
17	006	BSMT SE RM	A	Window		Rgt Sill	I	Concrete	White	0.0	QM
18	006	BSMT SE RM	A	Window Bar		Rgt	I	Metal	Gray	1.0	QM
19	006	BSMT SE RM	C	Wall		L Ctr	I	Block	White	-0.2	QM
20	006	BSMT SE RM	C	Baseboard		Ctr	I	Block	Black	0.1	QM
21	007	BSMT SW RM	B	Roof Drain		Ctr	I	Metal	White	-0.1	QM
22	007	BSMT SW RM	B	Wall		U Rgt	I	Brick	White	0.1	QM
23	008	BSMT N RM	B	Door		Rgt Rgt casing	I	Metal	Black	-0.4	QM
24	008	BSMT N RM	C	Door		Lft Lft casing	I	Metal	Gray	1.0	QM
25	008	BSMT N RM	A	Stairs		Ctr Railing cap	I	Concrete	Gray	0.1	QM
26	008	BSMT N RM	A	Ceiling			I	Concrete	White	0.0	QM
27	008	BSMT N RM	C	Gate		Ctr	I	Metal	Gray	-0.4	QM
28	009	1 S Room	A	Wall		U Ctr	I	Drywall	White	0.0	QM
29	009	1 S Room	A	Window		Lft Rgt casing	I	Wood	Brown	6.0	QM
30	010	1 NE Room	C	Wall		U Ctr	I	Drywall	White	0.0	QM
31	011	1 N Centr R	C	Door		Ctr Lft casing	I	Metal	Red	8.9	QM
32	012	2 Chapel	A	Window		Rgt Rgt casing	I	Wood	White	6.9	QM
33	012	2 Chapel	A	Window		Ctr Rgt casing	I	Wood	White	>9.9	QM
34	012	2 Chapel	C	Door		Ctr Lft casing	I	Metal	Red	4.3	QM
35	012	2 Chapel	C	Gate		Lft	I	Metal	Red	3.3	QM
36	013	3 F LIBRARY	A	Window		Ctr Rgt casing	I	Wood	White	>9.9	QM
37	013	3 F LIBRARY	A	Wall		U Ctr	I	Plaster	White	2.0	QM
38	013	3 F LIBRARY	C	Ceiling			I	Concrete	White	0.1	QM
39	013	3 F LIBRARY	C	Door		Ctr U Rgt	I	Metal	White	1.0	QM
40	013	3 F LIBRARY	C	Door		Rgt Rgt casing	I	Metal	White	1.9	QM
41	014	3 SCNTR RM	A	Wall		U Ctr	I	Plaster	White	0.5	QM
42	014	3 SCNTR RM	A	Wall		L Ctr	I	Concrete	Red	>9.9	QM
43	015	3 SE RM	B	Window		Ctr Sill	I	Wood	White	0.3	QM
44	015	3 SE RM	B	Wall		L Ctr	I	Plaster	Red	0.4	QM
45	015	3 SE RM	B	Door		Lft Lft casing	I	Wood	White	2.5	QM
46	015	3 SE RM	B	Door		Ctr U Rgt	I	Wood	White	0.0	QM
47	016	3 SW RM	D	Chalkboard		Lft	I	Wood	White	0.1	QM

SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Read No.	Rm No.	Room Name	Wall Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
48	016	3 SW RM	B Door		Rgt U Ctr	I Wood		White	2.9	QM
49	017	3 N RR	A Wall		U Lft	I Block		White	-0.1	QM
50	017	3 N RR	A Floor			I Concrete		Gray	-0.1	QM
51		CALIBRATION							1.1	TC
52		CALIBRATION							1.2	TC
53		CALIBRATION							1.1	TC
----- End of Readings -----										

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/21/03 USDB Castle, Building 475
 Report Date: 6/6/03 2 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/21/03 08:55
 Total Readings: 53 Actionable: 20
 Job Started: 05/21/03 08:55
 Job Finished: 05/21/03 15:22

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB SW Room									
005	A	Wall	U Ctr		I	Concrete	White	1.0	QM
004	A	Window	Rgt	Sill	I	Concrete	Gray	1.0	QM
Interior Room 004 SB NE Room									
011	D	Pipe	Lft		I	Metal	Red	1.0	QM
Interior Room 005 SB Stairwel									
013	A	Stairs	Ctr	Treads	I	Concrete	Gray	1.0	QM
015	B	Gate	Ctr		I	Metal	Gray	2.7	QM
Interior Room 006 BSMT SE RM									
018	A	Window Bar	Rgt		I	Metal	Gray	1.0	QM
Interior Room 008 BSMT N RM									
024	C	Door	Lft	Lft casing	I	Metal	Gray	1.0	QM
Interior Room 009 1 S Room									
029	A	Window	Lft	Rgt casing	I	Wood	Brown	6.0	QM
Interior Room 011 1 N Centr R									
031	C	Door	Ctr	Lft casing	I	Metal	Red	8.9	QM
Interior Room 012 2 Chapel									
032	A	Window	Rgt	Rgt casing	I	Wood	White	6.9	QM
033	A	Window	Ctr	Rgt casing	I	Wood	White	>9.9	QM
034	C	Door	Ctr	Lft casing	I	Metal	Red	4.3	QM
035	C	Gate	Lft		I	Metal	Red	3.3	QM
Interior Room 013 3 F LIBRARY									
037	A	Wall	U Ctr		I	Plaster	White	2.0	QM
036	A	Window	Ctr	Rgt casing	I	Wood	White	>9.9	QM
039	C	Door	Ctr	U Rgt	I	Metal	White	1.0	QM
040	C	Door	Rgt	Rgt casing	I	Metal	White	1.9	QM
Interior Room 014 3 SCNTR RM									
042	A	Wall	L Ctr		I	Concrete	Red	>9.9	QM
Interior Room 015 3 SE RM									
045	B	Door	Lft	Lft casing	I	Wood	White	2.5	QM
Interior Room 016 3 SW RM									
048	B	Door	Rgt	U Ctr	I	Wood	White	2.9	QM
Calibration Readings									
---- End of Readings ----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/21/03
 Report Date: 6/6/03
 Abatement Level: 1.0
 Report No. S#01442 - 05/21/03 08:55
 Total Readings: 53
 Job Started: 05/21/03 08:55
 Job Finished: 05/21/03 15:22

USDB Castle, Building 475
 2 Wing

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB SW Room									
005	A	Wall	U Ctr		I	Concrete	White	1.0	QM
006	A	Wall	U Rgt		I	Drywall	White	0.0	QM
004	A	Window	Rgt	Sill	I	Concrete	Gray	1.0	QM
Interior Room 002 SB Pipe Cha									
007	D	Wall	U Rgt		I	Brick	White	0.0	QM
008	D	Floor			I	Concrete	Gray	0.1	QM
Interior Room 003 SB SE Room									
009	D	Cell Door	Rgt		I	Metal	Gray	-0.3	QM
Interior Room 004 SB NE Room									
010	D	Ceiling			I	Concrete	White	0.5	QM
011	D	Pipe	Lft		I	Metal	Red	1.0	QM
Interior Room 005 SB Stairwel									
013	A	Stairs	Ctr	Treads	I	Concrete	Gray	1.0	QM
014	B	Wall	L Ctr		I	Block	Red	0.1	QM
015	B	Gate	Ctr		I	Metal	Gray	2.7	QM
012	C	Wall	U Ctr		I	Concrete	White	0.1	QM
Interior Room 006 BSMT SE RM									
016	A	Wall	U Ctr		I	Brick	White	0.4	QM
017	A	Window	Rgt	Sill	I	Concrete	White	0.0	QM
018	A	Window Bar	Rgt		I	Metal	Gray	1.0	QM
019	C	Wall	L Ctr		I	Block	White	-0.2	QM
020	C	Baseboard	Ctr		I	Block	Black	0.1	QM
Interior Room 007 BSMT SW RM									
022	B	Wall	U Rgt		I	Brick	White	0.1	QM
021	B	Roof Drain	Ctr		I	Metal	White	-0.1	QM
Interior Room 008 BSMT N RM									
026	A	Ceiling			I	Concrete	White	0.0	QM
025	A	Stairs	Ctr	Railing cap	I	Concrete	Gray	0.1	QM
023	B	Door	Rgt	Rgt casing	I	Metal	Black	-0.4	QM
024	C	Door	Lft	Lft casing	I	Metal	Gray	1.0	QM
027	C	Gate	Ctr		I	Metal	Gray	-0.4	QM
Interior Room 009 1 S Room									
028	A	Wall	U Ctr		I	Drywall	White	0.0	QM
029	A	Window	Lft	Rgt casing	I	Wood	Brown	6.0	QM
Interior Room 010 1 NE Room									
030	C	Wall	U Ctr		I	Drywall	White	0.0	QM
Interior Room 011 1 N Centr R									
031	C	Door	Ctr	Lft casing	I	Metal	Red	8.9	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 012 2 Chapel									
032	A	Window	Rgt	Rgt casing	I	Wood	White	6.9	QM
033	A	Window	Ctr	Rgt casing	I	Wood	White	>9.9	QM
034	C	Door	Ctr	Lft casing	I	Metal	Red	4.3	QM
035	C	Gate	Lft		I	Metal	Red	3.3	QM
Interior Room 013 3 F LIBRARY									
037	A	Wall	U Ctr		I	Plaster	White	2.0	QM
036	A	Window	Ctr	Rgt casing	I	Wood	White	>9.9	QM
038	C	Ceiling			I	Concrete	White	0.1	QM
039	C	Door	Ctr	U Rgt	I	Metal	White	1.0	QM
040	C	Door	Rgt	Rgt casing	I	Metal	White	1.9	QM
Interior Room 014 3 SCNTR RM									
042	A	Wall	L Ctr		I	Concrete	Red	>9.9	QM
041	A	Wall	U Ctr		I	Plaster	White	0.5	QM
Interior Room 015 3 SE RM									
044	B	Wall	L Ctr		I	Plaster	Red	0.4	QM
043	B	Window	Ctr	Sill	I	Wood	White	0.3	QM
045	B	Door	Lft	Lft casing	I	Wood	White	2.5	QM
046	B	Door	Ctr	U Rgt	I	Wood	White	0.0	QM
Interior Room 016 3 SW RM									
048	B	Door	Rgt	U Ctr	I	Wood	White	2.9	QM
047	D	Chalkboard	Lft		I	Wood	White	0.1	QM
Interior Room 017 3 N RR									
049	A	Wall	U Lft		I	Block	White	-0.1	QM
050	A	Floor			I	Concrete	Gray	-0.1	QM
Calibration Readings									
001								1.1	TC
002								1.1	TC
003								1.0	TC
051								1.1	TC
052								1.2	TC
053								1.1	TC
----- End of Readings -----									

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/21/03 USDB Castle, Building 475
 Report Date: 6/6/03 2 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/21/03 08:55
 Total Reading Sets: 47
 Job Started: 05/21/03 08:55
 Job Finished: 05/21/03 15:22

Structure	Total	Structure Distribution			
		Positive	Negative	Inconclusive	
Baseboard	1	0 <0%>	1 <100%>	0 <0%>	
Ceiling	3	0 <0%>	3 <100%>	0 <0%>	
Cell Door	1	0 <0%>	1 <100%>	0 <0%>	
Chalkboard	1	0 <0%>	1 <100%>	0 <0%>	
Door Lft casing	4	3 <75%>	0 <0%>	1 <25%>	
Door Rgt casing	2	1 <50%>	1 <50%>	0 <0%>	
Door U Ctr	1	1 <100%>	0 <0%>	0 <0%>	
Door U Rgt	2	0 <0%>	1 <50%>	1 <50%>	
Floor	2	0 <0%>	2 <100%>	0 <0%>	
Gate	3	2 <67%>	1 <33%>	0 <0%>	
Pipe	1	0 <0%>	0 <0%>	1 <100%>	
Roof Drain	1	0 <0%>	1 <100%>	0 <0%>	
Stairs Railing cap	1	0 <0%>	1 <100%>	0 <0%>	
Stairs Treads	1	0 <0%>	0 <0%>	1 <100%>	
Wall	15	2 <13%>	12 <80%>	1 <7%>	
Window Bar	1	0 <0%>	0 <0%>	1 <100%>	
Window Rgt casing	4	4 <100%>	0 <0%>	0 <0%>	
Window Sill	3	0 <0%>	2 <67%>	1 <33%>	
Inspection Totals:	47	13 < 28%>	27 < 57%>	7 < 15%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/29/03 10:10

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
8 Wing

INSPECTION DATE: 05/29/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

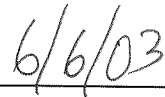
OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Ste. 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 8 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 10:10
 Total Readings: 32
 Job Started: 05/29/03 10:10
 Job Finished: 05/29/03 11:53

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
1	001	SB SCNTR RM	A	Wall	U Rgt		I	Brick	Green	0.3	QM
2	001	SB SCNTR RM	C	Door	Ctr Lft casing		I	Metal	Tan	-0.2	QM
3	001	SB SCNTR RM	C	Door	Ctr U Rgt		I	Metal	Brown	-0.2	QM
4	002	SB SE Rm	D	Window	Ctr Rgt casing		I	Wood	White	2.7	QM
5	003	SB NE Rm	D	Wall	U Ctr		I	Drywall	Beige	0.0	QM
6	003	SB NE Rm	A	Door	Rgt Lft casing		I	Wood	Brown	0.2	QM
7	004	SB E Cntr C	D	Wall	U Ctr		I	Brick	White	0.2	QM
8	005	SB Stairwel	B	Wall	L Ctr		I	Brick	Yellow	1.0	QM
9	005	SB Stairwel	B	Stairs	Ctr Railing cap		I	Metal	Red	0.2	QM
10	005	SB Stairwel	B	Stairs	Ctr Treads		I	Concrete	Gray	0.2	QM
11	006	BSMT NE RM	A	Wall	U Rgt		I	Brick	Yellow	-0.1	QM
12	006	BSMT NE RM	A	Door	Ctr Lft casing		I	Metal	Red	4.9	QM
13	006	BSMT NE RM	A	Door	Ctr U Lft		I	Metal	Beige	0.0	QM
14	007	B SE Room	A	Wall	U Ctr		I	Brick	White	0.5	QM
15	007	B SE Room	B	Wall	L Rgt		I	Brick	Red	0.3	QM
16	007	B SE Room	B	Door	Rgt Rgt casing		I	Metal	Red	0.2	QM
17	007	B SE Room	C	Window	Lft Lft casing		I	Wood	White	0.3	QM
18	008	B SW Room	A	Wall	L Ctr		I	Brick	Yellow	0.3	QM
19	008	B SW Room	A	Window	Lft Rgt casing		I	Metal	Gray	1.0	QM
20	009	2 S Cntr Rm	A	Wall	U Lft		I	Brick	Yellow	0.0	QM
21	009	2 S Cntr Rm	A	Door	Ctr Rgt casing		I	Wood	Brown	2.7	QM
22	010	4 SE Room	B	Window	Rgt Rgt casing		I	Wood	White	3.2	QM
23	010	4 SE Room	D	Door	Ctr Rgt casing		I	Wood	Red	4.2	QM
24	010	4 SE Room	A	Window	Ctr Lft casing		I	Wood	Brown	3.0	QM
25	010	4 SE Room	A	Clst Basebd	Ctr		I	Wood	White	0.2	QM
26	010	4 SE Room	A	Floor			I	Concrete	Gray	-0.1	QM
27	010	4 SE Room	C	Door	Rgt Rgt casing		I	Wood	White	0.4	QM
28	010	4 SE Room	C	Door	Ctr U Rgt		I	Wood	Red	0.0	QM
29	011	4 NE Room	D	Wall	L Ctr		I	Brick	White	1.0	QM
30		CALIBRATION								1.1	TC
31		CALIBRATION								1.2	TC
32		CALIBRATION								1.0	TC

---- End of Readings ----

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 8 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 10:10
 Total Readings: 32 Actionable: 9
 Job Started: 05/29/03 10:10
 Job Finished: 05/29/03 11:53

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 002 SB SE Rm									
004	D	Window	Ctr	Rgt casing	I	Wood	White	2.7	QM
Interior Room 005 SB Stairwel									
008	B	Wall	L Ctr		I	Brick	Yellow	1.0	QM
Interior Room 006 BSMT NE RM									
012	A	Door	Ctr	Lft casing	I	Metal	Red	4.9	QM
Interior Room 008 B SW Room									
019	A	Window	Lft	Rgt casing	I	Metal	Gray	1.0	QM
Interior Room 009 2 S Cntr Rm									
021	A	Door	Ctr	Rgt casing	I	Wood	Brown	2.7	QM
Interior Room 010 4 SE Room									
024	A	Window	Ctr	Lft casing	I	Wood	Brown	3.0	QM
022	B	Window	Rgt	Rgt casing	I	Wood	White	3.2	QM
023	D	Door	Ctr	Rgt casing	I	Wood	Red	4.2	QM
Interior Room 011 4 NE Room									
029	D	Wall	L Ctr		I	Brick	White	1.0	QM
Calibration Readings									
Calibration Readings									
---- End of Readings ----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 8 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 10:10
 Total Readings: 32
 Job Started: 05/29/03 10:10
 Job Finished: 05/29/03 11:53

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB SCNTR RM									
001	A	Wall	U Rgt		I	Brick	Green	0.3	QM
002	C	Door	Ctr	Lft casing	I	Metal	Tan	-0.2	QM
003	C	Door	Ctr	U Rgt	I	Metal	Brown	-0.2	QM
Interior Room 002 SB SE Rm									
004	D	Window	Ctr	Rgt casing	I	Wood	White	2.7	QM
Interior Room 003 SB NE Rm									
006	A	Door	Rgt	Lft casing	I	Wood	Brown	0.2	QM
005	D	Wall	U Ctr		I	Drywall	Beige	0.0	QM
Interior Room 004 SB E Cntr C									
007	D	Wall	U Ctr		I	Brick	White	0.2	QM
Interior Room 005 SB Stairwel									
008	B	Wall	L Ctr		I	Brick	Yellow	1.0	QM
010	B	Stairs	Ctr	Treads	I	Concrete	Gray	0.2	QM
009	B	Stairs	Ctr	Railing cap	I	Metal	Red	0.2	QM
Interior Room 006 BSMT NE RM									
011	A	Wall	U Rgt		I	Brick	Yellow	-0.1	QM
012	A	Door	Ctr	Lft casing	I	Metal	Red	4.9	QM
013	A	Door	Ctr	U Lft	I	Metal	Beige	0.0	QM
Interior Room 007 B SE Room									
014	A	Wall	U Ctr		I	Brick	White	0.5	QM
015	B	Wall	L Rgt		I	Brick	Red	0.3	QM
016	B	Door	Rgt	Rgt casing	I	Metal	Red	0.2	QM
017	C	Window	Lft	Lft casing	I	Wood	White	0.3	QM
Interior Room 008 B SW Room									
018	A	Wall	L Ctr		I	Brick	Yellow	0.3	QM
019	A	Window	Lft	Rgt casing	I	Metal	Gray	1.0	QM
Interior Room 009 2 S Cntr Rm									
020	A	Wall	U Lft		I	Brick	Yellow	0.0	QM
021	A	Door	Ctr	Rgt casing	I	Wood	Brown	2.7	QM
Interior Room 010 4 SE Room									
026	A	Floor			I	Concrete	Gray	-0.1	QM
024	A	Window	Ctr	Lft casing	I	Wood	Brown	3.0	QM
025	A	Clst Basebd	Ctr		I	Wood	White	0.2	QM
022	B	Window	Rgt	Rgt casing	I	Wood	White	3.2	QM
028	C	Door	Ctr	U Rgt	I	Wood	Red	0.0	QM
027	C	Door	Rgt	Rgt casing	I	Wood	White	0.4	QM
023	D	Door	Ctr	Rgt casing	I	Wood	Red	4.2	QM
Interior Room 011 4 NE Room									
029	D	Wall	L Ctr		I	Brick	White	1.0	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Calibration Readings									
030								1.1	TC
031								1.2	TC
032								1.0	TC
----- End of Readings -----									

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 8 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 10:10
 Total Reading Sets: 29
 Job Started: 05/29/03 10:10
 Job Finished: 05/29/03 11:53

Structure	Total	----- Structure Distribution -----			
		Positive	Negative	Inconclusive	
Clst Basebd	1	0 <0%>	1 <100%>	0 <0%>	
Door Lft casing	3	1 <33%>	2 <67%>	0 <0%>	
Door Rgt casing	4	2 <50%>	2 <50%>	0 <0%>	
Door U Lft	1	0 <0%>	1 <100%>	0 <0%>	
Door U Rgt	2	0 <0%>	2 <100%>	0 <0%>	
Floor	1	0 <0%>	1 <100%>	0 <0%>	
Stairs Railing cap	1	0 <0%>	1 <100%>	0 <0%>	
Stairs Treads	1	0 <0%>	1 <100%>	0 <0%>	
Wall	10	0 <0%>	8 <80%>	2 <20%>	
Window Lft casing	2	1 <50%>	1 <50%>	0 <0%>	
Window Rgt casing	3	2 <67%>	0 <0%>	1 <33%>	
Inspection Totals:	29	6 < 21%>	20 < 69%>	3 < 10%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/29/03 08:52

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
7 Wing

INSPECTION DATE: 05/29/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

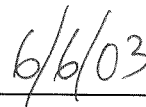
OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Ste. 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 7 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 08:52
 Total Readings: 27
 Job Started: 05/29/03 08:52
 Job Finished: 05/29/03 09:56

Read No.	Rm No.	Room Name	Wall Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
1		CALIBRATION							1.2	TC
2		CALIBRATION							1.2	TC
3		CALIBRATION							1.2	TC
4	001	SB N HALL	C Wall	U Lft		I Brick	White		-0.1	QM
5	001	SB N HALL	C Window	Lft Sill		I Concrete	Gray		0.2	QM
6	001	SB N HALL	C Ceiling			I Concrete	White		0.0	QM
7	002	SB Cell 136	B Wall	L Rgt		I Brick	Yellow		0.2	QM
8	002	SB Cell 136	C Cell Gate	Ctr		I Metal	Yellow		-0.2	QM
9	003	SB Entry	B Wall	U Lft		I Brick	Yellow		>9.9	QM
10	003	SB Entry	B Stairs	Lft Treads		I Metal	Black		7.0	QM
11	003	SB Entry	D Gate	Rgt		I Metal	Gray		-0.1	QM
12	004	B E HALL	D Wall	U Lft		I Brick	White		0.3	QM
13	004	B E HALL	B Wall	L Rgt		I Brick	Yellow		0.2	QM
14	004	B E HALL	B Gate	Rgt		I Metal	Gray		1.0	QM
15	004	B E HALL	B Ceiling			I Plaster	White		>9.9	QM
16	005	1 N Hall	C Wall	L Ctr		I Brick	Red		0.6	QM
17	005	1 N Hall	A I-Beam	Ctr		I Metal	Red		>9.9	QM
18	005	1 N Hall	A Ceiling			I Concrete	White		0.0	QM
19	005	1 N Hall	A Floor			I Concrete	Red		-0.1	QM
20	006	1 E En N Ha	D Ladder	Ctr		I Metal	Red		0.0	QM
21	006	1 E En N Ha	D Wall	U Ctr		I Brick	White		0.4	QM
22	006	1 E En N Ha	B Wall	L Ctr		I Block	Red		0.3	QM
23	007	2 S Hall	B I-Beam	Ctr		I Metal	White		-0.1	QM
24	007	2 S Hall	B Ceiling			I Concrete	White		0.2	QM
25	008	2 Cell 403	B Wall	U Lft		I Block	Yellow		0.2	QM
26	008	2 Cell 403	B Ceiling			I Concrete	White		0.0	QM
27	008	2 Cell 403	A Cell Gate	Ctr		I Metal	Red		-0.3	QM
---- End of Readings ----										

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 7 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 08:52
 Total Readings: 27 Actionable: 5
 Job Started: 05/29/03 08:52
 Job Finished: 05/29/03 09:56

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 003 SB Entry									
009	B	Wall	U Lft		I	Brick	Yellow	>9.9	QM
010	B	Stairs	Lft	Treads	I	Metal	Black	7.0	QM
Interior Room 004 B E HALL									
015	B	Ceiling			I	Plaster	White	>9.9	QM
014	B	Gate	Rgt		I	Metal	Gray	1.0	QM
Interior Room 005 1 N Hall									
017	A	I-Beam	Ctr		I	Metal	Red	>9.9	QM
Calibration Readings									
---- End of Readings ----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 7 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 08:52
 Total Readings: 27
 Job Started: 05/29/03 08:52
 Job Finished: 05/29/03 09:56

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB N HALL									
004	C	Wall	U Lft		I	Brick	White	-0.1	QM
006	C	Ceiling			I	Concrete	White	0.0	QM
005	C	Window	Lft	Sill	I	Concrete	Gray	0.2	QM
Interior Room 002 SB Cell 136									
007	B	Wall	L Rgt		I	Brick	Yellow	0.2	QM
008	C	Cell Gate	Ctr		I	Metal	Yellow	-0.2	QM
Interior Room 003 SB Entry									
009	B	Wall	U Lft		I	Brick	Yellow	>9.9	QM
010	B	Stairs	Lft	Treads	I	Metal	Black	7.0	QM
011	D	Gate	Rgt		I	Metal	Gray	-0.1	QM
Interior Room 004 B E HALL									
013	B	Wall	L Rgt		I	Brick	Yellow	0.2	QM
015	B	Ceiling			I	Plaster	White	>9.9	QM
014	B	Gate	Rgt		I	Metal	Gray	1.0	QM
012	D	Wall	U Lft		I	Brick	White	0.3	QM
Interior Room 005 1 N Hall									
019	A	Floor			I	Concrete	Red	-0.1	QM
018	A	Ceiling			I	Concrete	White	0.0	QM
017	A	I-Beam	Ctr		I	Metal	Red	>9.9	QM
016	C	Wall	L Ctr		I	Brick	Red	0.6	QM
Interior Room 006 1 E En N Ha									
022	B	Wall	L Ctr		I	Block	Red	0.3	QM
021	D	Wall	U Ctr		I	Brick	White	0.4	QM
020	D	Ladder	Ctr		I	Metal	Red	0.0	QM
Interior Room 007 2 S Hall									
024	B	Ceiling			I	Concrete	White	0.2	QM
023	B	I-Beam	Ctr		I	Metal	White	-0.1	QM
Interior Room 008 2 Cell 403									
027	A	Cell Gate	Ctr		I	Metal	Red	-0.3	QM
025	B	Wall	U Lft		I	Block	Yellow	0.2	QM
026	B	Ceiling			I	Concrete	White	0.0	QM
Calibration Readings									
001								1.2	TC
002								1.2	TC
003								1.2	TC

---- End of Readings ----

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 7 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 08:52
 Total Reading Sets: 24
 Job Started: 05/29/03 08:52
 Job Finished: 05/29/03 09:56

Structure	Total	----- Structure Distribution -----			
		Positive	Negative	Inconclusive	
Ceiling	5	1 <20%>	4 <80%>	0 <0%>	
Cell Gate	2	0 <0%>	2 <100%>	0 <0%>	
Floor	1	0 <0%>	1 <100%>	0 <0%>	
Gate	2	0 <0%>	1 <50%>	1 <50%>	
I-Beam	2	1 <50%>	1 <50%>	0 <0%>	
Ladder	1	0 <0%>	1 <100%>	0 <0%>	
Stairs Treads	1	1 <100%>	0 <0%>	0 <0%>	
Wall	9	1 <11%>	8 <89%>	0 <0%>	
Window Sill	1	0 <0%>	1 <100%>	0 <0%>	
Inspection Totals:	24	4 < 17%>	19 < 79%>	1 < 4%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/28/03 13:55

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
6 Wing

INSPECTION DATE: 05/28/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

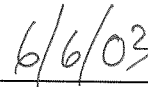
OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Ste. 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/28/03 USDB Castle, Building 475
 Report Date: 6/6/03 6 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/28/03 13:55
 Total Readings: 29
 Job Started: 05/28/03 13:55
 Job Finished: 05/28/03 14:47

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
1	001	SB N HALL	C	Wall	U	Ctr	I	Brick	Yellow	0.2	QM
2	001	SB N HALL	C	Window	Lft	Sill	I	Concrete	White	0.0	QM
3	002	SB E Hall	C	Floor			I	Concrete	Gray	0.1	QM
4	002	SB E Hall	D	Wall	U	Lft	I	Brick	Yellow	0.0	QM
5	002	SB E Hall	C	Gate		Ctr	I	Metal	Gray	-0.1	QM
6	002	SB E Hall	C	Ceiling			I	Concrete	White	0.2	QM
7	003	SB Cell 121	A	Wall	U	Lft	I	Brick	Yellow	0.5	QM
8	003	SB Cell 121	D	Dr Threshld		Ctr	I	Metal	Gray	3.2	QM
9	003	SB Cell 121	D	Cell Gate		Ctr	I	Metal	Black	-0.1	QM
10	004	B W HALL	B	Wall	U	Rgt	I	Brick	White	0.4	QM
11	004	B W HALL	A	Ceiling			I	Concrete	White	0.2	QM
12	005	B EN W HALL	A	Column		Ctr	I	Concrete	White	>9.9	QM
13	005	B EN W HALL	C	Stairs		Ctr Stringer	I	Metal	Gray	1.7	QM
14	005	B EN W HALL	C	Stairs		Ctr Treads	I	Metal	Yellow	4.1	QM
15	005	B EN W HALL	A	Wall	L	Rgt	I	Brick	White	0.0	QM
16	005	B EN W HALL	A	Door		Ctr Rgt casing	I	Metal	Gray	6.5	QM
17	006	1 W Hall	D	Wall	L	Lft	I	Brick	Yellow	0.0	QM
18	006	1 W Hall	D	I-Beam		Rgt	I	Metal	Black	0.0	QM
19	006	1 W Hall	D	Ceiling			I	Concrete	White	0.4	QM
20	007	1 Cell 303	A	Wall	U	Ctr	I	Block	White	0.5	QM
21	007	1 Cell 303	A	Ceiling			I	Concrete	White	0.3	QM
22	008	1 W Hall En	C	Wall	U	Rgt	I	Concrete	White	0.4	QM
23	008	1 W Hall En	C	Stairs		Rgt Stringer	I	Metal	Gray	1.0	QM
24	009	1 Cell 509	A	Wall	L	Rgt	I	Block	Yellow	0.0	QM
25	009	1 Cell 509	A	Ceiling			I	Concrete	White	0.4	QM
26	009	1 Cell 509	B	Cell Gate		Ctr	I	Metal	Black	-0.3	QM
27		CALIBRATION								1.1	TC
28		CALIBRATION								1.2	TC
29		CALIBRATION								1.2	TC

---- End of Readings ----

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/28/03 USDB Castle, Building 475
Report Date: 6/6/03 6 Wing
Abatement Level: 1.0
Report No. S#01442 - 05/28/03 13:55
Total Readings: 29 Actionable: 6
Job Started: 05/28/03 13:55
Job Finished: 05/28/03 14:47

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 003 SB Cell 121									
008	D	Dr Threshld	Ctr		I	Metal	Gray	3.2	QM
Interior Room 005 B EN W HALL									
016	A	Door	Ctr	Rgt casing	I	Metal	Gray	6.5	QM
012	A	Column	Ctr		I	Concrete	White	>9.9	QM
014	C	Stairs	Ctr	Treads	I	Metal	Yellow	4.1	QM
013	C	Stairs	Ctr	Stringer	I	Metal	Gray	1.7	QM
Interior Room 008 1 W Hall En									
023	C	Stairs	Rgt	Stringer	I	Metal	Gray	1.0	QM
Calibration Readings									

---- End of Readings ----

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/28/03 USDB Castle, Building 475
 Report Date: 6/6/03 6 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/28/03 13:55
 Total Readings: 29
 Job Started: 05/28/03 13:55
 Job Finished: 05/28/03 14:47

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB N HALL									
001	C	Wall	U Ctr		I	Brick	Yellow	0.2	QM
002	C	Window	Lft	Sill	I	Concrete	White	0.0	QM
Interior Room 002 SB E Hall									
003	C	Floor			I	Concrete	Gray	0.1	QM
006	C	Ceiling			I	Concrete	White	0.2	QM
005	C	Gate	Ctr		I	Metal	Gray	-0.1	QM
004	D	Wall	U Lft		I	Brick	Yellow	0.0	QM
Interior Room 003 SB Cell 121									
007	A	Wall	U Lft		I	Brick	Yellow	0.5	QM
008	D	Dr Threshld	Ctr		I	Metal	Gray	3.2	QM
009	D	Cell Gate	Ctr		I	Metal	Black	-0.1	QM
Interior Room 004 B W HALL									
011	A	Ceiling			I	Concrete	White	0.2	QM
010	B	Wall	U Rgt		I	Brick	White	0.4	QM
Interior Room 005 B EN W HALL									
015	A	Wall	L Rgt		I	Brick	White	0.0	QM
016	A	Door	Ctr	Rgt casing	I	Metal	Gray	6.5	QM
012	A	Column	Ctr		I	Concrete	White	>9.9	QM
014	C	Stairs	Ctr	Treads	I	Metal	Yellow	4.1	QM
013	C	Stairs	Ctr	Stringer	I	Metal	Gray	1.7	QM
Interior Room 006 1 W Hall									
017	D	Wall	L Lft		I	Brick	Yellow	0.0	QM
019	D	Ceiling			I	Concrete	White	0.4	QM
018	D	I-Beam	Rgt		I	Metal	Black	0.0	QM
Interior Room 007 1 Cell 303									
020	A	Wall	U Ctr		I	Block	White	0.5	QM
021	A	Ceiling			I	Concrete	White	0.3	QM
Interior Room 008 1 W Hall En									
022	C	Wall	U Rgt		I	Concrete	White	0.4	QM
023	C	Stairs	Rgt	Stringer	I	Metal	Gray	1.0	QM
Interior Room 009 1 Cell 509									
024	A	Wall	L Rgt		I	Block	Yellow	0.0	QM
025	A	Ceiling			I	Concrete	White	0.4	QM
026	B	Cell Gate	Ctr		I	Metal	Black	-0.3	QM
Calibration Readings									
027								1.1	TC
028								1.2	TC
029								1.2	TC

---- End of Readings ----

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/28/03 USDB Castle, Building 475
 Report Date: 6/6/03 6 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/28/03 13:55
 Total Reading Sets: 26
 Job Started: 05/28/03 13:55
 Job Finished: 05/28/03 14:47

Structure	Total	Structure Distribution			
		Positive	Negative	Inconclusive	
Ceiling	5	0 <0%>	5 <100%>	0 <0%>	
Cell Gate	2	0 <0%>	2 <100%>	0 <0%>	
Column	1	1 <100%>	0 <0%>	0 <0%>	
Door Rgt casing	1	1 <100%>	0 <0%>	0 <0%>	
Dr Threshld	1	1 <100%>	0 <0%>	0 <0%>	
Floor	1	0 <0%>	1 <100%>	0 <0%>	
Gate	1	0 <0%>	1 <100%>	0 <0%>	
I-Beam	1	0 <0%>	1 <100%>	0 <0%>	
Stairs Stringer	2	1 <50%>	0 <0%>	1 <50%>	
Stairs Treads	1	1 <100%>	0 <0%>	0 <0%>	
Wall	9	0 <0%>	9 <100%>	0 <0%>	
Window Sill	1	0 <0%>	1 <100%>	0 <0%>	
Inspection Totals:	26	5 < 19%>	20 < 77%>	1 < 4%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/22/03 14:35

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
5 Wing

INSPECTION DATE: 05/22/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

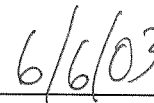
OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Ste. 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 5 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 14:35
 Total Readings: 76
 Job Started: 05/22/03 14:35
 Job Finished: 05/28/03 13:44

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
1	001	SB Kithcen	C	Window		Ctr Sill	I	Concrete	White	4.7	QM
2	002	SB N Entry	C	Gate		Ctr	I	Metal	Gray	1.7	QM
3	002	SB N Entry	C	Door		Ctr Lft casing	I	Metal	Gray	0.0	QM
4	002	SB N Entry	C	Door		Ctr U Rgt	I	Metal	Gray	0.0	QM
5	003	SB N Tunnel	A	Wall	U	Rgt	I	Brick	Yellow	2.2	QM
6	003	SB N Tunnel	B	Door		Ctr Rgt casing	I	Metal	Brown	0.1	QM
7	004	SB NE Rm	C	Wall	U	Rgt	I	Concrete	White	0.3	QM
8	004	SB NE Rm	C	Column		Ctr	I	Concrete	White	7.8	QM
9		CALIBRATION								1.1	TC
10		CALIBRATION								1.2	TC
11		CALIBRATION								1.0	TC
12		CALIBRATION								1.2	TC
13		CALIBRATION								1.2	TC
14		CALIBRATION								1.3	TC
15	005	SB NE HVAC	A	Wall	U	Rgt	I	Concrete	White	>9.9	QM
16	005	SB NE HVAC	B	Wall	L	Rgt	I	Brick	White	>9.9	QM
17	005	SB NE HVAC	C	Door		Ctr U Rgt	I	Metal	White	8.4	QM
18	006	SB E HALL	B	Wall	L	Rgt	I	Brick	Yellow	5.0	QM
19	006	SB E HALL	D	Wall	U	Lft	I	Drywall	White	0.1	QM
20	006	SB E HALL	D	Window		Lft Lft casing	I	Wood	White	0.0	QM
21	006	SB E HALL	D	Column		Lft	I	Concrete	White	4.2	QM
22	007	SB SE ROOM	D	Wall	U	Lft	I	Concrete	White	5.8	QM
23	007	SB SE ROOM	D	Window		Lft Sill	I	Concrete	White	7.9	QM
24	007	SB SE ROOM	B	Shelf		Rgt	I	Wood	White	0.0	QM
25	008	SB E STAIRS	A	Wall	L	Ctr	I	Brick	Yellow	>9.9	QM
26	008	SB E STAIRS	A	Stairs		Ctr Railing cap	I	Metal	Gray	0.0	QM
27	008	SB E STAIRS	A	Stairs		Ctr Risers	I	Concrete	Gray	0.0	QM
28	008	SB E STAIRS	C	Ceiling			I	Concrete	White	2.2	QM
29	009	SB Mail Rm	B	Wall	U	Ctr	I	Concrete	White	1.0	QM
30	009	SB Mail Rm	D	Column		Ctr	I	Concrete	White	0.4	QM
31	009	SB Mail Rm	D	Wall	U	Ctr	I	Brick	White	0.0	QM
32	010	SB W STAIRS	D	Wall	L	Ctr	I	Brick	Yellow	4.9	QM
33	011	2 SB NE RM	C	Wall	U	Rgt	I	Concrete	White	0.0	QM
34	011	2 SB NE RM	C	Floor			I	Concrete	Gray	-0.2	QM
35	011	2 SB NE RM	C	Column		Ctr	I	Concrete	White	0.0	QM
36	012	B SE Rm	A	Wall	U	Ctr	I	Brick	White	1.0	QM
37	012	B SE Rm	D	Wall	U	Rgt	I	Concrete	White	0.2	QM
38	013	B Weight Rm	D	Wall	U	Rgt	I	Concrete	White	0.2	QM
39	013	B Weight Rm	D	Window		Rgt Sill	I	Concrete	White	1.0	QM
40	013	B Weight Rm	B	Duct		Rgt	I	Metal	White	0.2	QM
41	013	B Weight Rm	D	Column		Rgt	I	Concrete	White	8.5	QM
42	014	B Library	A	Wall	U	Ctr	I	Brick	White	>9.9	QM
43		CALIBRATION								1.2	TC
44		CALIBRATION								1.2	TC
45		CALIBRATION								1.0	TC
46	015	1 SE Rm	D	Stairs		Lft Railing cap	I	Metal	Gray	0.1	QM
47	015	1 SE Rm	D	Wall	U	Ctr	I	Plaster	Yellow	-0.1	QM

SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
48	015	1 SE Rm	B	Wall	U	Ctr	I	Block	Yellow	-0.1	QM
49	015	1 SE Rm	B	Wall	U	Ctr	I	Concrete	Yellow	-0.1	QM
50	016	1 SW	A	Wall	U	Ctr	I	Plaster	Green	0.0	QM
51	017	1 Bake Shop	C	Wall	U	Lft	I	Plaster	Yellow	0.1	QM
52	017	1 Bake Shop	B	Wall	L	Ctr	I	Block	Yellow	0.0	QM
53	018	1 Ration Rm	A	Wall	U	Ctr	I	Plaster	Yellow	0.0	QM
54	018	1 Ration Rm	B	Wall	U	Lft	I	Block	Yellow	-0.1	QM
55	019	1 SW Rm	D	Wall	U	Ctr	I	Concrete	White	-0.2	QM
56	019	1 SW Rm	D	Wall	L	Ctr	I	Block	White	0.0	QM
57	020	1 Stairs	A	Wall	U	Rgt	I	Brick	White	0.1	QM
58	020	1 Stairs	A	Stairs	Rgt	Railing cap	I	Wood	Gray	>9.9	QM
59	020	1 Stairs	A	Door	Ctr	Lft casing	I	Metal	Red	5.9	QM
60	020	1 Stairs	A	Stairs	Ctr	Newel post	I	Metal	Gray	0.0	QM
61	020	1 Stairs	A	Stairs	Ctr	Stringer	I	Concrete	Gray	4.9	QM
62	021	2 Auditor	A	Door	Ctr	Lft casing	I	Metal	Gray	6.1	QM
63	021	2 Auditor	A	Door	Ctr	U Ctr	I	Metal	Gray	8.4	QM
64	021	2 Auditor	A	Gate	Ctr		I	Metal	Gray	6.4	QM
65	021	2 Auditor	A	Wall	L	Rgt	I	Plaster	White	>9.9	QM
66	021	2 Auditor	A	Panel	Rgt		I	Wood	White	0.2	QM
67	021	2 Auditor	C	Stage Apron	Ctr		I	Wood	Red	1.5	QM
68	021	2 Auditor	C	Stage Apron	Ctr		I	Wood	White	2.5	QM
69	022	2 Stage	D	Wall	U	Ctr	I	Brick	White	2.5	QM
70	022	2 Stage	D	Ceiling			I	Concrete	Gray	0.1	QM
71	023	4 Projct Rm	C	Wall	U	Rgt	I	Concrete	Green	>9.9	QM
72	023	4 Projct Rm	C	Door	Ctr	U Rgt	I	Metal	Black	5.2	QM
73	023	4 Projct Rm	A	Ceiling			I	Metal	Tan	>9.9	QM
74	023	4 Projct Rm	A	Door	Lft	Lft casing	I	Metal	Beige	>9.9	QM
75	023	4 Projct Rm	A	Door	Ctr	U Rgt	I	Metal	Beige	3.0	QM
76	023	4 Projct Rm	A	Gate	Ctr		I	Metal	Red	8.3	QM
---- End of Readings ----											

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 5 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 14:35
 Total Readings: 76 Actionable: 35
 Job Started: 05/22/03 14:35
 Job Finished: 05/28/03 13:44

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB Kithcen									
001	C	Window	Ctr	Sill	I	Concrete	White	4.7	QM
Interior Room 002 SB N Entry									
002	C	Gate	Ctr		I	Metal	Gray	1.7	QM
Interior Room 003 SB N Tunnel									
005	A	Wall	U Rgt		I	Brick	Yellow	2.2	QM
Interior Room 004 SB NE Rm									
008	C	Column	Ctr		I	Concrete	White	7.8	QM
Interior Room 005 SB NE HVAC									
015	A	Wall	U Rgt		I	Concrete	White	>9.9	QM
016	B	Wall	L Rgt		I	Brick	White	>9.9	QM
017	C	Door	Ctr	U Rgt	I	Metal	White	8.4	QM
Interior Room 006 SB E HALL									
018	B	Wall	L Rgt		I	Brick	Yellow	5.0	QM
021	D	Column	Lft		I	Concrete	White	4.2	QM
Interior Room 007 SB SE ROOM									
022	D	Wall	U Lft		I	Concrete	White	5.8	QM
023	D	Window	Lft	Sill	I	Concrete	White	7.9	QM
Interior Room 008 SB E STAIRS									
025	A	Wall	L Ctr		I	Brick	Yellow	>9.9	QM
028	C	Ceiling			I	Concrete	White	2.2	QM
Interior Room 009 SB Mail Rm									
029	B	Wall	U Ctr		I	Concrete	White	1.0	QM
Interior Room 010 SB W STAIRS									
032	D	Wall	L Ctr		I	Brick	Yellow	4.9	QM
Interior Room 012 B SE Rm									
036	A	Wall	U Ctr		I	Brick	White	1.0	QM
Interior Room 013 B Weight Rm									
039	D	Window	Rgt	Sill	I	Concrete	White	1.0	QM
041	D	Column	Rgt		I	Concrete	White	8.5	QM
Interior Room 014 B Library									
042	A	Wall	U Ctr		I	Brick	White	>9.9	QM
Interior Room 020 1 Stairs									
059	A	Door	Ctr	Lft casing	I	Metal	Red	5.9	QM
061	A	Stairs	Ctr	Stringer	I	Concrete	Gray	4.9	QM
058	A	Stairs	Rgt	Railing cap	I	Wood	Gray	>9.9	QM

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 021 2 Auditor									
065	A	Wall	L Rgt		I	Plaster	White	>9.9	QM
062	A	Door	Ctr	Lft casing	I	Metal	Gray	6.1	QM
063	A	Door	Ctr	U Ctr	I	Metal	Gray	8.4	QM
064	A	Gate	Ctr		I	Metal	Gray	6.4	QM
067	C	Stage Apron	Ctr		I	Wood	Red	1.5	QM
068	C	Stage Apron	Ctr		I	Wood	White	2.5	QM
Interior Room 022 2 Stage									
069	D	Wall	U Ctr		I	Brick	White	2.5	QM
Interior Room 023 4 Projct Rm									
073	A	Ceiling			I	Metal	Tan	>9.9	QM
074	A	Door	Lft	Lft casing	I	Metal	Beige	>9.9	QM
075	A	Door	Ctr	U Rgt	I	Metal	Beige	3.0	QM
076	A	Gate	Ctr		I	Metal	Red	8.3	QM
071	C	Wall	U Rgt		I	Concrete	Green	>9.9	QM
072	C	Door	Ctr	U Rgt	I	Metal	Black	5.2	QM
Calibration Readings									
----- End of Readings -----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 5 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 14:35
 Total Readings: 76
 Job Started: 05/22/03 14:35
 Job Finished: 05/28/03 13:44

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
Interior Room 001 SB Kithcen									
001	C	Window	Ctr	Sill	I	Concrete	White	4.7	QM
Interior Room 002 SB N Entry									
003	C	Door	Ctr	Lft casing	I	Metal	Gray	0.0	QM
004	C	Door	Ctr	U Rgt	I	Metal	Gray	0.0	QM
002	C	Gate	Ctr		I	Metal	Gray	1.7	QM
Interior Room 003 SB N Tunnel									
005	A	Wall	U Rgt		I	Brick	Yellow	2.2	QM
006	B	Door	Ctr	Rgt casing	I	Metal	Brown	0.1	QM
Interior Room 004 SB NE Rm									
007	C	Wall	U Rgt		I	Concrete	White	0.3	QM
008	C	Column	Ctr		I	Concrete	White	7.8	QM
Interior Room 005 SB NE HVAC									
015	A	Wall	U Rgt		I	Concrete	White	>9.9	QM
016	B	Wall	L Rgt		I	Brick	White	>9.9	QM
017	C	Door	Ctr	U Rgt	I	Metal	White	8.4	QM
Interior Room 006 SB E HALL									
018	B	Wall	L Rgt		I	Brick	Yellow	5.0	QM
019	D	Wall	U Lft		I	Drywall	White	0.1	QM
020	D	Window	Lft	Lft casing	I	Wood	White	0.0	QM
021	D	Column	Lft		I	Concrete	White	4.2	QM
Interior Room 007 SB SE ROOM									
024	B	Shelf	Rgt		I	Wood	White	0.0	QM
022	D	Wall	U Lft		I	Concrete	White	5.8	QM
023	D	Window	Lft	Sill	I	Concrete	White	7.9	QM
Interior Room 008 SB E STAIRS									
025	A	Wall	L Ctr		I	Brick	Yellow	>9.9	QM
027	A	Stairs	Ctr	Risers	I	Concrete	Gray	0.0	QM
026	A	Stairs	Ctr	Railing cap	I	Metal	Gray	0.0	QM
028	C	Ceiling			I	Concrete	White	2.2	QM
Interior Room 009 SB Mail Rm									
029	B	Wall	U Ctr		I	Concrete	White	1.0	QM
031	D	Wall	U Ctr		I	Brick	White	0.0	QM
030	D	Column	Ctr		I	Concrete	White	0.4	QM
Interior Room 010 SB W STAIRS									
032	D	Wall	L Ctr		I	Brick	Yellow	4.9	QM
Interior Room 011 2 SB NE RM									
033	C	Wall	U Rgt		I	Concrete	White	0.0	QM
034	C	Floor			I	Concrete	Gray	-0.2	QM
035	C	Column	Ctr		I	Concrete	White	0.0	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 012 B SE Rm									
036	A	Wall	U Ctr		I	Brick	White	1.0	QM
037	D	Wall	U Rgt		I	Concrete	White	0.2	QM
Interior Room 013 B Weight Rm									
040	B	Duct	Rgt		I	Metal	White	0.2	QM
038	D	Wall	U Rgt		I	Concrete	White	0.2	QM
039	D	Window	Rgt	Sill	I	Concrete	White	1.0	QM
041	D	Column	Rgt		I	Concrete	White	8.5	QM
Interior Room 014 B Library									
042	A	Wall	U Ctr		I	Brick	White	>9.9	QM
Interior Room 015 1 SE Rm									
048	B	Wall	U Ctr		I	Block	Yellow	-0.1	QM
049	B	Wall	U Ctr		I	Concrete	Yellow	-0.1	QM
047	D	Wall	U Ctr		I	Plaster	Yellow	-0.1	QM
046	D	Stairs	Lft	Railing cap	I	Metal	Gray	0.1	QM
Interior Room 016 1 SW									
050	A	Wall	U Ctr		I	Plaster	Green	0.0	QM
Interior Room 017 1 Bake Shop									
052	B	Wall	L Ctr		I	Block	Yellow	0.0	QM
051	C	Wall	U Lft		I	Plaster	Yellow	0.1	QM
Interior Room 018 1 Ration Rm									
053	A	Wall	U Ctr		I	Plaster	Yellow	0.0	QM
054	B	Wall	U Lft		I	Block	Yellow	-0.1	QM
Interior Room 019 1 SW Rm									
056	D	Wall	L Ctr		I	Block	White	0.0	QM
055	D	Wall	U Ctr		I	Concrete	White	-0.2	QM
Interior Room 020 1 Stairs									
057	A	Wall	U Rgt		I	Brick	White	0.1	QM
059	A	Door	Ctr	Lft casing	I	Metal	Red	5.9	QM
060	A	Stairs	Ctr	Newel post	I	Metal	Gray	0.0	QM
061	A	Stairs	Ctr	Stringer	I	Concrete	Gray	4.9	QM
058	A	Stairs	Rgt	Railing cap	I	Wood	Gray	>9.9	QM
Interior Room 021 2 Auditor									
065	A	Wall	L Rgt		I	Plaster	White	>9.9	QM
062	A	Door	Ctr	Lft casing	I	Metal	Gray	6.1	QM
063	A	Door	Ctr	U Ctr	I	Metal	Gray	8.4	QM
064	A	Gate	Ctr		I	Metal	Gray	6.4	QM
066	A	Panel	Rgt		I	Wood	White	0.2	QM
067	C	Stage Apron	Ctr		I	Wood	Red	1.5	QM
068	C	Stage Apron	Ctr		I	Wood	White	2.5	QM
Interior Room 022 2 Stage									
069	D	Wall	U Ctr		I	Brick	White	2.5	QM
070	D	Ceiling			I	Concrete	Gray	0.1	QM
Interior Room 023 4 Projct Rm									
073	A	Ceiling			I	Metal	Tan	>9.9	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
074	A	Door	Lft	Lft casing	I	Metal	Beige	>9.9	QM
075	A	Door	Ctr	U Rgt	I	Metal	Beige	3.0	QM
076	A	Gate	Ctr		I	Metal	Red	8.3	QM
071	C	Wall	U Rgt		I	Concrete	Green	>9.9	QM
072	C	Door	Ctr	U Rgt	I	Metal	Black	5.2	QM
Calibration Readings									
009								1.1	TC
010								1.2	TC
011								1.0	TC
012								1.2	TC
013								1.2	TC
014								1.3	TC
043								1.2	TC
044								1.2	TC
045								1.0	TC
----- End of Readings -----									

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 5 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 14:35
 Total Reading Sets: 67
 Job Started: 05/22/03 14:35
 Job Finished: 05/28/03 13:44

Structure	Total	Structure Distribution			
		Positive	Negative	Inconclusive	
Ceiling	3	2 <67%>	1 <33%>	0 <0%>	
Column	5	3 <60%>	2 <40%>	0 <0%>	
Door Lft casing	4	3 <75%>	1 <25%>	0 <0%>	
Door Rgt casing	1	0 <0%>	1 <100%>	0 <0%>	
Door U Ctr	1	1 <100%>	0 <0%>	0 <0%>	
Door U Rgt	4	3 <75%>	1 <25%>	0 <0%>	
Duct	1	0 <0%>	1 <100%>	0 <0%>	
Floor	1	0 <0%>	1 <100%>	0 <0%>	
Gate	3	3 <100%>	0 <0%>	0 <0%>	
Panel	1	0 <0%>	1 <100%>	0 <0%>	
Shelf	1	0 <0%>	1 <100%>	0 <0%>	
Stage Apron	2	2 <100%>	0 <0%>	0 <0%>	
Stairs Newel post	1	0 <0%>	1 <100%>	0 <0%>	
Stairs Railing cap	3	1 <33%>	2 <67%>	0 <0%>	
Stairs Risers	1	0 <0%>	1 <100%>	0 <0%>	
Stairs Stringer	1	1 <100%>	0 <0%>	0 <0%>	
Wall	30	11 <37%>	17 <57%>	2 <7%>	
Window Lft casing	1	0 <0%>	1 <100%>	0 <0%>	
Window Sill	3	2 <67%>	0 <0%>	1 <33%>	
Inspection Totals:	67	32 < 48%>	32 < 48%>	3 < 4%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/22/03 13:37

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
4 Wing

INSPECTION DATE: 05/22/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

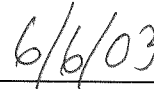
OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Ste. 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 4 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 13:37
 Total Readings: 12
 Job Started: 05/22/03 13:37
 Job Finished: 05/22/03 13:49

Read No.	Rm No.	Room Name	Wall Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
1	001	SB W Hall	A Wall	L Rgt		I Brick		Yellow	>9.9	QM
2	001	SB W Hall	A Wall	U Rgt		I Block		White	0.0	QM
3	001	SB W Hall	A Window	Rgt Sill		I Concrete		Yellow	>9.9	QM
4	001	SB W Hall	A Gate	Rgt		I Metal		Gray	-0.3	QM
5	001	SB W Hall	A Ceiling			I Concrete		White	>9.9	QM
6	002	SB Cel 4128	B Cell Gate	Ctr		I Metal		Black	0.4	QM
7	002	SB Cel 4128	C Wall	U Lft		I Brick		White	>9.9	QM
8	002	SB Cel 4128	C Table	Lft		I Concrete		Gray	0.1	QM
9	003	SB E Hall	D Wall	U Rgt		I Brick		White	>9.9	QM
10	003	SB E Hall	D Window	Rgt Sill		I Concrete		Yellow	-0.1	QM
11	003	SB E Hall	D Window	Rgt Lft casing		I Metal		Black	-0.3	QM
12	004	SB S Hall	A Stairs	Ctr Stringer		I Metal		Gray	2.5	QM
---- End of Readings ----										

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 4 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 13:37
 Total Readings: 12 Actionable: 6
 Job Started: 05/22/03 13:37
 Job Finished: 05/22/03 13:49

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB W Hall									
001	A	Wall	L Rgt		I	Brick	Yellow	>9.9	QM
005	A	Ceiling			I	Concrete	White	>9.9	QM
003	A	Window	Rgt	Sill	I	Concrete	Yellow	>9.9	QM
Interior Room 002 SB Cel 4128									
007	C	Wall	U Lft		I	Brick	White	>9.9	QM
Interior Room 003 SB E Hall									
009	D	Wall	U Rgt		I	Brick	White	>9.9	QM
Interior Room 004 SB S Hall									
012	A	Stairs	Ctr	Stringer	I	Metal	Gray	2.5	QM
---- End of Readings ----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 4 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 13:37
 Total Readings: 12
 Job Started: 05/22/03 13:37
 Job Finished: 05/22/03 13:49

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB W Hall									
001	A	Wall	L Rgt		I	Brick	Yellow	>9.9	QM
002	A	Wall	U Rgt		I	Block	White	0.0	QM
005	A	Ceiling			I	Concrete	White	>9.9	QM
003	A	Window	Rgt	Sill	I	Concrete	Yellow	>9.9	QM
004	A	Gate	Rgt		I	Metal	Gray	-0.3	QM
Interior Room 002 SB Cel 4128									
006	B	Cell Gate	Ctr		I	Metal	Black	0.4	QM
007	C	Wall	U Lft		I	Brick	White	>9.9	QM
008	C	Table	Lft		I	Concrete	Gray	0.1	QM
Interior Room 003 SB E Hall									
009	D	Wall	U Rgt		I	Brick	White	>9.9	QM
010	D	Window	Rgt	Sill	I	Concrete	Yellow	-0.1	QM
011	D	Window	Rgt	Lft casing	I	Metal	Black	-0.3	QM
Interior Room 004 SB S Hall									
012	A	Stairs	Ctr	Stringer	I	Metal	Gray	2.5	QM
---- End of Readings ----									

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 4 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 13:37
 Total Reading Sets: 12
 Job Started: 05/22/03 13:37
 Job Finished: 05/22/03 13:49

Structure	Total	----- Structure Distribution -----			
		Positive	Negative	Inconclusive	
Ceiling	1	1 <100%>	0 <0%>	0 <0%>	
Cell Gate	1	0 <0%>	1 <100%>	0 <0%>	
Gate	1	0 <0%>	1 <100%>	0 <0%>	
Stairs Stringer	1	1 <100%>	0 <0%>	0 <0%>	
Table	1	0 <0%>	1 <100%>	0 <0%>	
Wall	4	3 <75%>	1 <25%>	0 <0%>	
Window Lft casing	1	0 <0%>	1 <100%>	0 <0%>	
Window Sill	2	1 <50%>	1 <50%>	0 <0%>	
Inspection Totals:	12	6 < 50%>	6 < 50%>	0 < 0%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/22/03 08:36

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa, Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
3 Wing

INSPECTION DATE: 05/22/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

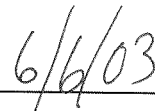
OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Ste. 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 3 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 08:36
 Total Readings: 80
 Job Started: 05/22/03 08:36
 Job Finished: 05/22/03 13:37

Read No.	Rm No.	Room Name	Wall Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
1		CALIBRATION							1.1	TC
2		CALIBRATION							1.1	TC
3		CALIBRATION							1.1	TC
4	001	SB S Hall	A Window		Rgt Sill	I	Concrete	White	0.1	QM
5	001	SB S Hall	A Wall		U Rgt	I	Brick	White	>9.9	QM
6	001	SB S Hall	A Floor			I	Concrete	Gray	0.2	QM
7	001	SB S Hall	A Floor			I	Concrete	Red	0.0	QM
8	001	SB S Hall	A Drain Line		Rgt	I	Metal	White	-0.2	QM
9	001	SB S Hall	A Ceiling			I	Concrete	White	5.9	QM
10	001	SB S Hall	A Window Bars		Rgt	I	Metal	Gray	>9.9	QM
11	001	SB S Hall	B Gate		Ctr	I	Metal	Gray	>9.9	QM
12	002	SBSMT C 121	B Wall		U Lft	I	Brick	White	>9.9	QM
13	002	SBSMT C 121	B Bed Frame		Lft	I	Metal	Gray	0.2	QM
14	002	SBSMT C 121	B Floor			I	Concrete	Gray	-0.1	QM
15	002	SBSMT C 121	A Door		Ctr Lft casing	I	Metal	Yellow	-0.2	QM
16	002	SBSMT C 121	A Gate		Ctr	I	Metal	Yellow	-0.3	QM
17	003	SB W Hall	B Window		Lft Sill	I	Concrete	White	-0.1	QM
18	003	SB W Hall	B Wnd Mullian		Lft	I	Metal	White	-0.1	QM
19	003	SB W Hall	B Wall		L Lft	I	Brick	Yellow	>9.9	QM
20	003	SB W Hall	B Clst Basbrd		Lft	I	Concrete	Red	8.8	QM
21	003	SB W Hall	D F Hose Cbnt		Lft	I	Metal	Red	-0.1	QM
22	004	SB Cell 117	A Wall		U Rgt	I	Brick	Yellow	>9.9	QM
23	004	SB Cell 117	A Floor			I	Concrete	Gray	0.5	QM
24	004	SB Cell 117	B Gate		Ctr	I	Metal	Yellow	-0.4	QM
25	005	SB E Hall	C Wall		U Lft	I	Brick	White	>9.9	QM
26	005	SB E Hall	C Ceiling			I	Concrete	White	5.5	QM
27	005	SB E Hall	C Fire Pipe		Ctr	I	Metal	Red	-0.2	QM
28	005	SB E Hall	C Stairs		Ctr Stringer	I	Metal	Gray	>9.9	QM
29	005	SB E Hall	C Stairs		Rgt Railing cap	I	Metal	Gray	1.8	QM
30	005	SB E Hall	A Cntrl Gate		Rgt	I	Metal	Gray	1.8	QM
31	006	B S HALL	A Wall		L Rgt	I	Concrete	Yellow	1.0	QM
32	006	B S HALL	A Floor			I	Concrete	Red	0.2	QM
33	006	B S HALL	A Ceiling			I	Concrete	White	7.1	QM
34	006	B S HALL	B Gate		Ctr	I	Metal	Gray	>9.9	QM
35	006	B S HALL	C Cell Gate		Lft	I	Metal	Yellow	-0.3	QM
36	007	B W Hall	B Window		Ctr Sill	I	Concrete	White	0.0	QM
37	007	B W Hall	B Floor			I	Concrete	Gray	-0.2	QM
38	008	B Cell 217	B Wall		L Rgt	I	Concrete	Yellow	1.6	QM
39	008	B Cell 217	B Bed Frame		Ctr	I	Metal	Gray	-0.2	QM
40	008	B Cell 217	B Floor			I	Concrete	Black	-0.1	QM
41	008	B Cell 217	C Cell Gate		Ctr	I	Metal	Yellow	-0.1	QM
42	009	B E Entry	B Wall		U Rgt	I	Concrete	White	1.0	QM
43	009	B E Entry	B Floor			I	Concrete	Gray	-0.1	QM
44	009	B E Entry	B Cntrl Gate		Rgt	I	Metal	Gray	1.8	QM
45	009	B E Entry	B Stairs		Ctr Stringer	I	Metal	Gray	1.9	QM
46	009	B E Entry	D Door		Ctr Lft casing	I	Metal	Gray	0.3	QM
47	009	B E Entry	D Door		Ctr U Rgt	I	Metal	Gray	-0.1	QM

SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
48	009	B E Entry	D	Entry Gate		Rgt	I	Metal	Gray	1.0	QM
49	010	1 FL S HALL	A	Wall		U Rgt	I	Brick	White	7.4	QM
50	010	1 FL S HALL	A	Floor			I	Concrete	Red	0.1	QM
51	010	1 FL S HALL	C	I-Beam		Ctr	I	Metal	White	>9.9	QM
52	010	1 FL S HALL	C	Ceiling			I	Concrete	White	>9.9	QM
53	011	1 Cell 321	A	Cell Gate		Ctr	I	Metal	White	0.0	QM
54	011	1 Cell 321	A	Ceiling			I	Concrete	White	>9.9	QM
55	011	1 Cell 321	A	Floor			I	Concrete	Red	-0.1	QM
56	011	1 Cell 321	B	Wall		U Ctr	I	Block	White	>9.9	QM
57	012	1 W Hall	B	Wall		U Ctr	I	Brick	Red	-0.1	QM
58	012	1 W Hall	B	Column		Ctr	I	Metal	Black	>9.9	QM
59	012	1 W Hall	B	Stairs		Ctr Stringer	I	Metal	Black	0.0	QM
60	012	1 W Hall	D	Wall		U Ctr	I	Block	White	>9.9	QM
61	013	1 E Entry	B	Wall		U Ctr	I	Block	White	>9.9	QM
62	013	1 E Entry	B	I-Beam		Rgt	I	Metal	White	>9.9	QM
63	013	1 E Entry	B	Ceiling			I	Concrete	White	>9.9	QM
64	013	1 E Entry	B	Stairs		Rgt Treads	I	Metal	Gray	>9.9	QM
65	013	1 E Entry	B	Cntrl Gate		Rgt	I	Metal	Gray	1.8	QM
66	013	1 E Entry	D	Door		Ctr Lft casing	I	Metal	White	4.7	QM
67	013	1 E Entry	D	Door		Ctr Lft casing	I	Metal	Red	-0.1	QM
68	013	1 E Entry	D	Entry Gate		Ctr	I	Metal	Red	0.0	QM
69	014	1 Cell 706	B	Wall		U Rgt	I	Block	White	>9.9	QM
70	014	1 Cell 706	C	Ceiling			I	Concrete	White	>9.9	QM
71	014	1 Cell 706	B	Floor			I	Concrete	Red	0.0	QM
72	014	1 Cell 706	C	Cell Gate		Ctr	I	Metal	Red	-0.3	QM
73	014	1 Cell 706	C	Floor			I	Concrete	Yellow	1.0	QM
74	015	4 W Stairs	B	Stairs		Ctr Treads	I	Metal	Black	1.6	QM
75	015	4 W Stairs	B	Stairs		Ctr Stringer	I	Metal	Black	-0.1	QM
76	015	4 W Stairs	B	Wall		U Lft	I	Brick	White	0.5	QM
77	015	4 W Stairs	D	Wall		L Ctr	I	Block	Red	>9.9	QM
78		CALIBRATION								1.2	TC
79		CALIBRATION								1.2	TC
80		CALIBRATION								1.1	TC

---- End of Readings ----

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 3 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 08:36
 Total Readings: 80 Actionable: 39
 Job Started: 05/22/03 08:36
 Job Finished: 05/22/03 13:37

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB S Hall									
005	A	Wall	U Rgt		I	Brick	White	>9.9	QM
009	A	Ceiling			I	Concrete	White	5.9	QM
010	A	Window Bars	Rgt		I	Metal	Gray	>9.9	QM
011	B	Gate	Ctr		I	Metal	Gray	>9.9	QM
Interior Room 002 SBSMT C 121									
012	B	Wall	U Lft		I	Brick	White	>9.9	QM
Interior Room 003 SB W Hall									
019	B	Wall	L Lft		I	Brick	Yellow	>9.9	QM
020	B	Clst Basbrd	Lft		I	Concrete	Red	8.8	QM
Interior Room 004 SB Cell 117									
022	A	Wall	U Rgt		I	Brick	Yellow	>9.9	QM
Interior Room 005 SB E Hall									
030	A	Cntrl Gate	Rgt		I	Metal	Gray	1.8	QM
025	C	Wall	U Lft		I	Brick	White	>9.9	QM
026	C	Ceiling			I	Concrete	White	5.5	QM
028	C	Stairs	Ctr	Stringer	I	Metal	Gray	>9.9	QM
029	C	Stairs	Rgt	Railing cap	I	Metal	Gray	1.8	QM
Interior Room 006 B S HALL									
031	A	Wall	L Rgt		I	Concrete	Yellow	1.0	QM
033	A	Ceiling			I	Concrete	White	7.1	QM
034	B	Gate	Ctr		I	Metal	Gray	>9.9	QM
Interior Room 008 B Cell 217									
038	B	Wall	L Rgt		I	Concrete	Yellow	1.6	QM
Interior Room 009 B E Entry									
042	B	Wall	U Rgt		I	Concrete	White	1.0	QM
045	B	Stairs	Ctr	Stringer	I	Metal	Gray	1.9	QM
044	B	Cntrl Gate	Rgt		I	Metal	Gray	1.8	QM
048	D	Entry Gate	Rgt		I	Metal	Gray	1.0	QM
Interior Room 010 1 FL S HALL									
049	A	Wall	U Rgt		I	Brick	White	7.4	QM
052	C	Ceiling			I	Concrete	White	>9.9	QM
051	C	I-Beam	Ctr		I	Metal	White	>9.9	QM
Interior Room 011 1 Cell 321									
054	A	Ceiling			I	Concrete	White	>9.9	QM
056	B	Wall	U Ctr		I	Block	White	>9.9	QM
Interior Room 012 1 W Hall									
058	B	Column	Ctr		I	Metal	Black	>9.9	QM
060	D	Wall	U Ctr		I	Block	White	>9.9	QM

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
Interior Room 013 1 E Entry									
061	B	Wall	U Ctr		I	Block	White	>9.9	QM
063	B	Ceiling			I	Concrete	White	>9.9	QM
064	B	Stairs	Rgt	Treads	I	Metal	Gray	>9.9	QM
062	B	I-Beam	Rgt		I	Metal	White	>9.9	QM
065	B	Cntrl Gate	Rgt		I	Metal	Gray	1.8	QM
066	D	Door	Ctr	Lft casing	I	Metal	White	4.7	QM
Interior Room 014 1 Cell 706									
069	B	Wall	U Rgt		I	Block	White	>9.9	QM
073	C	Floor			I	Concrete	Yellow	1.0	QM
070	C	Ceiling			I	Concrete	White	>9.9	QM
Interior Room 015 4 W Stairs									
074	B	Stairs	Ctr	Treads	I	Metal	Black	1.6	QM
077	D	Wall	L Ctr		I	Block	Red	>9.9	QM
Calibration Readings									
----- End of Readings -----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 3 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 08:36
 Total Readings: 80
 Job Started: 05/22/03 08:36
 Job Finished: 05/22/03 13:37

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB S Hall									
005	A	Wall	U Rgt		I	Brick	White	>9.9	QM
006	A	Floor			I	Concrete	Gray	0.2	QM
007	A	Floor			I	Concrete	Red	0.0	QM
009	A	Ceiling			I	Concrete	White	5.9	QM
004	A	Window	Rgt	Sill	I	Concrete	White	0.1	QM
008	A	Drain Line	Rgt		I	Metal	White	-0.2	QM
010	A	Window Bars	Rgt		I	Metal	Gray	>9.9	QM
011	B	Gate	Ctr		I	Metal	Gray	>9.9	QM
Interior Room 002 SBSMT C 121									
015	A	Door	Ctr	Lft casing	I	Metal	Yellow	-0.2	QM
016	A	Gate	Ctr		I	Metal	Yellow	-0.3	QM
012	B	Wall	U Lft		I	Brick	White	>9.9	QM
014	B	Floor			I	Concrete	Gray	-0.1	QM
013	B	Bed Frame	Lft		I	Metal	Gray	0.2	QM
Interior Room 003 SB W Hall									
019	B	Wall	L Lft		I	Brick	Yellow	>9.9	QM
017	B	Window	Lft	Sill	I	Concrete	White	-0.1	QM
018	B	Wnd Mullian	Lft		I	Metal	White	-0.1	QM
020	B	Clst Basbrd	Lft		I	Concrete	Red	8.8	QM
021	D	F Hose Cbnt	Lft		I	Metal	Red	-0.1	QM
Interior Room 004 SB Cell 117									
022	A	Wall	U Rgt		I	Brick	Yellow	>9.9	QM
023	A	Floor			I	Concrete	Gray	0.5	QM
024	B	Gate	Ctr		I	Metal	Yellow	-0.4	QM
Interior Room 005 SB E Hall									
030	A	Cntrl Gate	Rgt		I	Metal	Gray	1.8	QM
025	C	Wall	U Lft		I	Brick	White	>9.9	QM
026	C	Ceiling			I	Concrete	White	5.5	QM
028	C	Stairs	Ctr	Stringer	I	Metal	Gray	>9.9	QM
029	C	Stairs	Rgt	Railing cap	I	Metal	Gray	1.8	QM
027	C	Fire Pipe	Ctr		I	Metal	Red	-0.2	QM
Interior Room 006 B S HALL									
031	A	Wall	L Rgt		I	Concrete	Yellow	1.0	QM
032	A	Floor			I	Concrete	Red	0.2	QM
033	A	Ceiling			I	Concrete	White	7.1	QM
034	B	Gate	Ctr		I	Metal	Gray	>9.9	QM
035	C	Cell Gate	Lft		I	Metal	Yellow	-0.3	QM
Interior Room 007 B W Hall									
037	B	Floor			I	Concrete	Gray	-0.2	QM
036	B	Window	Ctr	Sill	I	Concrete	White	0.0	QM
Interior Room 008 B Cell 217									
038	B	Wall	L Rgt		I	Concrete	Yellow	1.6	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
040	B	Floor			I	Concrete	Black	-0.1	QM
039	B	Bed Frame	Ctr		I	Metal	Gray	-0.2	QM
041	C	Cell Gate	Ctr		I	Metal	Yellow	-0.1	QM
Interior Room 009 B E Entry									
042	B	Wall	U Rgt		I	Concrete	White	1.0	QM
043	B	Floor			I	Concrete	Gray	-0.1	QM
045	B	Stairs	Ctr	Stringer	I	Metal	Gray	1.9	QM
044	B	Cntrl Gate	Rgt		I	Metal	Gray	1.8	QM
046	D	Door	Ctr	Lft casing	I	Metal	Gray	0.3	QM
047	D	Door	Ctr	U Rgt	I	Metal	Gray	-0.1	QM
048	D	Entry Gate	Rgt		I	Metal	Gray	1.0	QM
Interior Room 010 1 FL S HALL									
049	A	Wall	U Rgt		I	Brick	White	7.4	QM
050	A	Floor			I	Concrete	Red	0.1	QM
052	C	Ceiling			I	Concrete	White	>9.9	QM
051	C	I-Beam	Ctr		I	Metal	White	>9.9	QM
Interior Room 011 1 Cell 321									
055	A	Floor			I	Concrete	Red	-0.1	QM
054	A	Ceiling			I	Concrete	White	>9.9	QM
053	A	Cell Gate	Ctr		I	Metal	White	0.0	QM
056	B	Wall	U Ctr		I	Block	White	>9.9	QM
Interior Room 012 1 W Hall									
057	B	Wall	U Ctr		I	Brick	Red	-0.1	QM
059	B	Stairs	Ctr	Stringer	I	Metal	Black	0.0	QM
058	B	Column	Ctr		I	Metal	Black	>9.9	QM
060	D	Wall	U Ctr		I	Block	White	>9.9	QM
Interior Room 013 1 E Entry									
061	B	Wall	U Ctr		I	Block	White	>9.9	QM
063	B	Ceiling			I	Concrete	White	>9.9	QM
064	B	Stairs	Rgt	Treads	I	Metal	Gray	>9.9	QM
062	B	I-Beam	Rgt		I	Metal	White	>9.9	QM
065	B	Cntrl Gate	Rgt		I	Metal	Gray	1.8	QM
066	D	Door	Ctr	Lft casing	I	Metal	White	4.7	QM
067	D	Door	Ctr	Lft casing	I	Metal	Red	-0.1	QM
068	D	Entry Gate	Ctr		I	Metal	Red	0.0	QM
Interior Room 014 1 Cell 706									
069	B	Wall	U Rgt		I	Block	White	>9.9	QM
071	B	Floor			I	Concrete	Red	0.0	QM
073	C	Floor			I	Concrete	Yellow	1.0	QM
070	C	Ceiling			I	Concrete	White	>9.9	QM
072	C	Cell Gate	Ctr		I	Metal	Red	-0.3	QM
Interior Room 015 4 W Stairs									
076	B	Wall	U Lft		I	Brick	White	0.5	QM
074	B	Stairs	Ctr	Treads	I	Metal	Black	1.6	QM
075	B	Stairs	Ctr	Stringer	I	Metal	Black	-0.1	QM
077	D	Wall	L Ctr		I	Block	Red	>9.9	QM
Calibration Readings									
001								1.1	TC
002								1.1	TC

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
003								1.1	TC
078								1.2	TC
079								1.2	TC
080								1.1	TC
----- End of Readings -----									

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/22/03 USDB Castle, Building 475
 Report Date: 6/6/03 3 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/22/03 08:36
 Total Reading Sets: 74
 Job Started: 05/22/03 08:36
 Job Finished: 05/22/03 13:37

Structure	Total	----- Structure Distribution -----			
		Positive	Negative	Inconclusive	
Bed Frame	2	0 <0%>	2 <100%>	0 <0%>	
Ceiling	7	7 <100%>	0 <0%>	0 <0%>	
Cell Gate	4	0 <0%>	4 <100%>	0 <0%>	
Clst Basbrd	1	1 <100%>	0 <0%>	0 <0%>	
Cntrl Gate	3	3 <100%>	0 <0%>	0 <0%>	
Column	1	1 <100%>	0 <0%>	0 <0%>	
Door Lft casing	4	1 <25%>	3 <75%>	0 <0%>	
Door U Rgt	1	0 <0%>	1 <100%>	0 <0%>	
Drain Line	1	0 <0%>	1 <100%>	0 <0%>	
Entry Gate	2	0 <0%>	1 <50%>	1 <50%>	
F Hose Cbnt	1	0 <0%>	1 <100%>	0 <0%>	
Fire Pipe	1	0 <0%>	1 <100%>	0 <0%>	
Floor	12	0 <0%>	11 <92%>	1 <8%>	
Gate	4	2 <50%>	2 <50%>	0 <0%>	
I-Beam	2	2 <100%>	0 <0%>	0 <0%>	
Stairs Railing cap	1	1 <100%>	0 <0%>	0 <0%>	
Stairs Stringer	4	2 <50%>	2 <50%>	0 <0%>	
Stairs Treads	2	2 <100%>	0 <0%>	0 <0%>	
Wall	16	12 <75%>	2 <13%>	2 <13%>	
Window Bars	1	1 <100%>	0 <0%>	0 <0%>	
Window Sill	3	0 <0%>	3 <100%>	0 <0%>	
Wnd Mullian	1	0 <0%>	1 <100%>	0 <0%>	
Inspection Totals:	74	35 < 47%>	35 < 47%>	4 < 5%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/29/03 11:53

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
1 Wing

INSPECTION DATE: 05/29/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

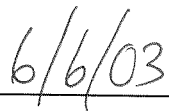
OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Ste. 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 1 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 11:53
 Total Readings: 50
 Job Started: 05/29/03 11:53
 Job Finished: 05/29/03 13:02

Read No.	Rm No.	Room Name	Wall Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
1	001	SB NW RM	B Wall	U Ctr		I Brick		White	0.1	QM
2	001	SB NW RM	D Door	Lft U Lft		I Metal		White	-0.1	QM
3	003	B S Cntr Rm	C Fireline	Rgt		I Metal		Red	-0.4	QM
4	003	B S Cntr Rm	A Wall	U Rgt		I Brick		Green	0.2	QM
5	003	B S Cntr Rm	A Floor			I Concrete		Gray	0.3	QM
6	003	B S Cntr Rm	C Door	Ctr Lft casing		I Metal		Brown	4.6	QM
7	004	B Center RM	B Wall	L Ctr		I Block		White	-0.1	QM
8	005	B W Cntr Rm	B Wall	U Lft		I Brick		White	0.3	QM
9	005	B W Cntr Rm	B Floor			I Concrete		Gray	0.0	QM
10	006	B Stairwell	C Wall	L Rgt		I Plaster		Yellow	>9.9	QM
11	006	B Stairwell	B Door	Ctr Lft casing		I Wood		Red	0.0	QM
12	006	B Stairwell	B Door	Ctr U Rgt		I Wood		White	0.1	QM
13	006	B Stairwell	D Stairs	Lft Railing cap		I Metal		Red	1.0	QM
14	006	B Stairwell	D Stairs	Ctr Stringer		I Concrete		Red	1.0	QM
15	006	B Stairwell	D Window	Rgt Sill		I Wood		Brown	>9.9	QM
16	007	1 FL NW RR	B Wall	L Lft		I Plaster		White	>9.9	QM
17	007	1 FL NW RR	B Window	Ctr Lft casing		I Wood		Red	0.0	QM
18	008	1 Entry Foy	A Wall	L Lft		I Plaster		Yellow	0.4	QM
19	008	1 Entry Foy	A Door	Lft Lft casing		I Metal		Red	0.0	QM
20	008	1 Entry Foy	A Door	Ctr U Lft		I Metal		Red	0.2	QM
21	009	1 SE Room	A Window	Rgt Lft casing		I Wood		Brown	0.3	QM
22	009	1 SE Room	A Floor			I Concrete		Red	0.0	QM
23	009	1 SE Room	A Gate	Ctr		I Metal		Red	>9.9	QM
24	009	1 SE Room	A Door	Ctr Lft casing		I Metal		Beige	6.5	QM
25	009	1 SE Room	A Door	Ctr U Rgt		I Metal		Beige	>9.9	QM
26	009	1 SE Room	A Wall	U Rgt		I Plaster		White	>9.9	QM
27	009	1 SE Room	B Railing	Ctr Railing		I Metal		Red	1.0	QM
28	010	2 FL S ROOM	A Wall	U Rgt		I Plaster		White	0.0	QM
29	010	2 FL S ROOM	A Baseboard	Rgt		I Wood		Yellow	3.6	QM
30	010	2 FL S ROOM	A Window	Rgt Lft casing		I Wood		White	>9.9	QM
31	011	2 Hall	B Wall	L Ctr		I Plaster		Yellow	0.0	QM
32	011	2 Hall	B Baseboard	Rgt		I Plaster		Black	>9.9	QM
33	012	3 FL S ROOM	A Wall	U Ctr		I Plaster		Yellow	0.3	QM
34	012	3 FL S ROOM	A Window	Ctr Lft casing		I Wood		Red	>9.9	QM
35	012	3 FL S ROOM	C Door	Ctr Lft casing		I Wood		Red	>9.9	QM
36	013	3 N Latrine	C Wall	U Ctr		I Plaster		Yellow	0.1	QM
37	014	3 NE Room	B Wall	L Rgt		I Concrete		Yellow	>9.9	QM
38	014	3 NE Room	B Door	Lft Lft casing		I Wood		White	2.2	QM
39	014	3 NE Room	B Door	Lft U Lft		I Wood		Red	2.2	QM
40	014	3 NE Room	D Window	Rgt Sill		I Wood		White	4.6	QM
41	015	3 W Cntr Rm	C Ceiling			I Plaster		Yellow	7.2	QM
42	016	4 FL SW RM	A Wall	U Rgt		I Concrete		Yellow	0.0	QM
43	016	4 FL SW RM	A Window	Rgt Lft casing		I Wood		Red	>9.9	QM
44	016	4 FL SW RM	D Door	Lft Header		I Wood		Red	2.5	QM
45	016	4 FL SW RM	D Door	Lft U Lft		I Wood		Beige	0.3	QM
46	017	3 W Center	A Wall	L Ctr		I Plaster		Blue	0.0	QM
47	017	3 W Center	A Window	Rgt Lft casing		I Wood		Blue	0.3	QM

SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
48	017	3 W Center	B	Door		Ctr Lft casing	I Wood		Blue	2.2	QM
49	018	4 Stairwell	A	Wall		L Lft	I Plaster		Yellow	>9.9	QM
50	018	4 Stairwell	A	Gate		Ctr	I Metal		Yellow	>9.9	QM
---- End of Readings ----											

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 1 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 11:53
 Total Readings: 50 Actionable: 26
 Job Started: 05/29/03 11:53
 Job Finished: 05/29/03 13:02

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 003 B S Cntr Rm									
006	C	Door	Ctr	Lft casing	I	Metal	Brown	4.6	QM
Interior Room 006 B Stairwell									
010	C	Wall	L Rgt		I	Plaster	Yellow	>9.9	QM
015	D	Window	Rgt	Sill	I	Wood	Brown	>9.9	QM
013	D	Stairs	Lft	Railing cap	I	Metal	Red	1.0	QM
014	D	Stairs	Ctr	Stringer	I	Concrete	Red	1.0	QM
Interior Room 007 1 FL NW RR									
016	B	Wall	L Lft		I	Plaster	White	>9.9	QM
Interior Room 009 1 SE Room									
026	A	Wall	U Rgt		I	Plaster	White	>9.9	QM
024	A	Door	Ctr	Lft casing	I	Metal	Beige	6.5	QM
025	A	Door	Ctr	U Rgt	I	Metal	Beige	>9.9	QM
023	A	Gate	Ctr		I	Metal	Red	>9.9	QM
027	B	Railing	Ctr	Railing	I	Metal	Red	1.0	QM
Interior Room 010 2 FL S ROOM									
029	A	Baseboard	Rgt		I	Wood	Yellow	3.6	QM
030	A	Window	Rgt	Lft casing	I	Wood	White	>9.9	QM
Interior Room 011 2 Hall									
032	B	Baseboard	Rgt		I	Plaster	Black	>9.9	QM
Interior Room 012 3 FL S ROOM									
034	A	Window	Ctr	Lft casing	I	Wood	Red	>9.9	QM
035	C	Door	Ctr	Lft casing	I	Wood	Red	>9.9	QM
Interior Room 014 3 NE Room									
037	B	Wall	L Rgt		I	Concrete	Yellow	>9.9	QM
038	B	Door	Lft	Lft casing	I	Wood	White	2.2	QM
039	B	Door	Lft	U Lft	I	Wood	Red	2.2	QM
040	D	Window	Rgt	Sill	I	Wood	White	4.6	QM
Interior Room 015 3 W Cntr Rm									
041	C	Ceiling			I	Plaster	Yellow	7.2	QM
Interior Room 016 4 FL SW RM									
043	A	Window	Rgt	Lft casing	I	Wood	Red	>9.9	QM
044	D	Door	Lft	Header	I	Wood	Red	2.5	QM
Interior Room 017 3 W Center									
048	B	Door	Ctr	Lft casing	I	Wood	Blue	2.2	QM
Interior Room 018 4 Stairwell									
049	A	Wall	L Lft		I	Plaster	Yellow	>9.9	QM
050	A	Gate	Ctr		I	Metal	Yellow	>9.9	QM

---- End of Readings ----

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
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DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 1 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 11:53
 Total Readings: 50
 Job Started: 05/29/03 11:53
 Job Finished: 05/29/03 13:02

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB NW RM									
001	B	Wall	U Ctr		I	Brick	White	0.1	QM
002	D	Door	Lft	U Lft	I	Metal	White	-0.1	QM
Interior Room 003 B S Cntr Rm									
004	A	Wall	U Rgt		I	Brick	Green	0.2	QM
005	A	Floor			I	Concrete	Gray	0.3	QM
006	C	Door	Ctr	Lft casing	I	Metal	Brown	4.6	QM
003	C	Fireline	Rgt		I	Metal	Red	-0.4	QM
Interior Room 004 B Center RM									
007	B	Wall	L Ctr		I	Block	White	-0.1	QM
Interior Room 005 B W Cntr Rm									
008	B	Wall	U Lft		I	Brick	White	0.3	QM
009	B	Floor			I	Concrete	Gray	0.0	QM
Interior Room 006 B Stairwell									
011	B	Door	Ctr	Lft casing	I	Wood	Red	0.0	QM
012	B	Door	Ctr	U Rgt	I	Wood	White	0.1	QM
010	C	Wall	L Rgt		I	Plaster	Yellow	>9.9	QM
015	D	Window	Rgt	Sill	I	Wood	Brown	>9.9	QM
013	D	Stairs	Lft	Railing cap	I	Metal	Red	1.0	QM
014	D	Stairs	Ctr	Stringer	I	Concrete	Red	1.0	QM
Interior Room 007 1 FL NW RR									
016	B	Wall	L Lft		I	Plaster	White	>9.9	QM
017	B	Window	Ctr	Lft casing	I	Wood	Red	0.0	QM
Interior Room 008 1 Entry Foy									
018	A	Wall	L Lft		I	Plaster	Yellow	0.4	QM
019	A	Door	Lft	Lft casing	I	Metal	Red	0.0	QM
020	A	Door	Ctr	U Lft	I	Metal	Red	0.2	QM
Interior Room 009 1 SE Room									
026	A	Wall	U Rgt		I	Plaster	White	>9.9	QM
022	A	Floor			I	Concrete	Red	0.0	QM
021	A	Window	Rgt	Lft casing	I	Wood	Brown	0.3	QM
024	A	Door	Ctr	Lft casing	I	Metal	Beige	6.5	QM
025	A	Door	Ctr	U Rgt	I	Metal	Beige	>9.9	QM
023	A	Gate	Ctr		I	Metal	Red	>9.9	QM
027	B	Railing	Ctr	Railing	I	Metal	Red	1.0	QM
Interior Room 010 2 FL S ROOM									
028	A	Wall	U Rgt		I	Plaster	White	0.0	QM
029	A	Baseboard	Rgt		I	Wood	Yellow	3.6	QM
030	A	Window	Rgt	Lft casing	I	Wood	White	>9.9	QM
Interior Room 011 2 Hall									
031	B	Wall	L Ctr		I	Plaster	Yellow	0.0	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
032	B	Baseboard	Rgt		I	Plaster	Black	>9.9	QM
Interior Room 012 3 FL S ROOM									
033	A	Wall	U Ctr		I	Plaster	Yellow	0.3	QM
034	A	Window	Ctr	Lft casing	I	Wood	Red	>9.9	QM
035	C	Door	Ctr	Lft casing	I	Wood	Red	>9.9	QM
Interior Room 013 3 N Latrine									
036	C	Wall	U Ctr		I	Plaster	Yellow	0.1	QM
Interior Room 014 3 NE Room									
037	B	Wall	L Rgt		I	Concrete	Yellow	>9.9	QM
038	B	Door	Lft	Lft casing	I	Wood	White	2.2	QM
039	B	Door	Lft	U Lft	I	Wood	Red	2.2	QM
040	D	Window	Rgt	Sill	I	Wood	White	4.6	QM
Interior Room 015 3 W Cntr Rm									
041	C	Ceiling			I	Plaster	Yellow	7.2	QM
Interior Room 016 4 FL SW RM									
042	A	Wall	U Rgt		I	Concrete	Yellow	0.0	QM
043	A	Window	Rgt	Lft casing	I	Wood	Red	>9.9	QM
044	D	Door	Lft	Header	I	Wood	Red	2.5	QM
045	D	Door	Lft	U Lft	I	Wood	Beige	0.3	QM
Interior Room 017 3 W Center									
046	A	Wall	L Ctr		I	Plaster	Blue	0.0	QM
047	A	Window	Rgt	Lft casing	I	Wood	Blue	0.3	QM
048	B	Door	Ctr	Lft casing	I	Wood	Blue	2.2	QM
Interior Room 018 4 Stairwell									
049	A	Wall	L Lft		I	Plaster	Yellow	>9.9	QM
050	A	Gate	Ctr		I	Metal	Yellow	>9.9	QM
----- End of Readings -----									

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/6/03 1 Wing
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 11:53
 Total Reading Sets: 50
 Job Started: 05/29/03 11:53
 Job Finished: 05/29/03 13:02

Structure	Total	Structure Distribution			
		Positive	Negative	Inconclusive	
Baseboard	2	2 <100%>	0 <0%>	0 <0%>	
Ceiling	1	1 <100%>	0 <0%>	0 <0%>	
Door Header	1	1 <100%>	0 <0%>	0 <0%>	
Door Lft casing	7	5 <71%>	2 <29%>	0 <0%>	
Door U Lft	4	1 <25%>	3 <75%>	0 <0%>	
Door U Rgt	2	1 <50%>	1 <50%>	0 <0%>	
Fireline	1	0 <0%>	1 <100%>	0 <0%>	
Floor	3	0 <0%>	3 <100%>	0 <0%>	
Gate	2	2 <100%>	0 <0%>	0 <0%>	
Railing Railing	1	0 <0%>	0 <0%>	1 <100%>	
Stairs Railing cap	1	0 <0%>	0 <0%>	1 <100%>	
Stairs Stringer	1	0 <0%>	0 <0%>	1 <100%>	
Wall	16	5 <31%>	11 <69%>	0 <0%>	
Window Lft casing	6	3 <50%>	3 <50%>	0 <0%>	
Window Sill	2	2 <100%>	0 <0%>	0 <0%>	
Inspection Totals:	50	23 < 46%>	24 < 48%>	3 < 6%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/30/03 10:34

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
Exterior

INSPECTION DATE: 05/30/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

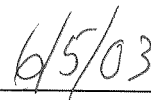
OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Ste. 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/30/03 USDB Castle, Building 475
 Report Date: 6/5/03 Exterior
 Abatement Level: 1.0
 Report No. S#01442 - 05/30/03 10:34
 Total Readings: 17
 Job Started: 05/30/03 10:34
 Job Finished: 05/30/03 11:16

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
1	001	Exterior	A	Railing		Ctr Railing	I	Metal	Brown	3.1	QM
2	001	Exterior	A	Door		Ctr Lft casing	I	Metal	Brown	0.2	QM
3	001	Exterior	A	Door		Rgt U Rgt	I	Metal	Brown	0.0	QM
4	001	Exterior	A	Railing		Lft Railing	I	Metal	Brown	0.0	QM
5	001	Exterior	A	Door		Lft Lft casing	I	Metal	Brown	0.2	QM
6	001	Exterior	A	Door		Rgt U Rgt	I	Metal	Brown	-0.1	QM
7	001	Exterior	A	Column		Lft U column	I	Metal	Brown	-0.1	QM
8	001	Exterior	B	Fire Es Ldr		Ctr	I	Metal	Brown	-0.3	QM
9	001	Exterior	B	Railing		Lft Railing	I	Metal	Brown	0.0	QM
10	001	Exterior	B	Framework		Lft	I	Metal	Brown	-0.2	QM
11	001	Exterior	B	Gate		Lft	I	Metal	Gray	-0.1	QM
12	001	Exterior	C	Stairs		Rgt Treads	I	Metal	Yellow	5.8	QM
13	001	Exterior	C	Stairs		Rgt Railing cap	I	Metal	Brown	1.5	QM
14	001	Exterior	C	Column		Ctr U column	I	Metal	Yellow	1.0	QM
15		CALIBRATION								1.0	TC
16		CALIBRATION								1.2	TC
17		CALIBRATION								1.1	TC

---- End of Readings ----

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/30/03 USDB Castle, Building 475
Report Date: 6/5/03 Exterior
Abatement Level: 1.0
Report No. S#01442 - 05/30/03 10:34
Total Readings: 17 Actionable: 4
Job Started: 05/30/03 10:34
Job Finished: 05/30/03 11:16

Reading					Paint			Lead	Mode
No.	Wall	Structure	Location	Member	Cond	Substrate	Color	(mg/cm²)	
Exterior Room 001 Exterior									
001	A	Railing	Ctr	Railing	I	Metal	Brown	3.1	QM
012	C	Stairs	Rgt	Treads	I	Metal	Yellow	5.8	QM
013	C	Stairs	Rgt	Railing cap	I	Metal	Brown	1.5	QM
014	C	Column	Ctr	U column	I	Metal	Yellow	1.0	QM
Calibration Readings									
----- End of Readings -----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/30/03 USDB Castle, Building 475
 Report Date: 6/5/03 Exterior
 Abatement Level: 1.0
 Report No. S#01442 - 05/30/03 10:34
 Total Readings: 17
 Job Started: 05/30/03 10:34
 Job Finished: 05/30/03 11:16

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Exterior Room 001 Exterior									
005	A	Door	Lft	Lft casing	I	Metal	Brown	0.2	QM
002	A	Door	Ctr	Lft casing	I	Metal	Brown	0.2	QM
003	A	Door	Rgt	U Rgt	I	Metal	Brown	0.0	QM
006	A	Door	Rgt	U Rgt	I	Metal	Brown	-0.1	QM
004	A	Railing	Lft	Railing	I	Metal	Brown	0.0	QM
001	A	Railing	Ctr	Railing	I	Metal	Brown	3.1	QM
007	A	Column	Lft	U column	I	Metal	Brown	-0.1	QM
009	B	Railing	Lft	Railing	I	Metal	Brown	0.0	QM
010	B	Framework	Lft		I	Metal	Brown	-0.2	QM
011	B	Gate	Lft		I	Metal	Gray	-0.1	QM
008	B	Fire Es Ldr	Ctr		I	Metal	Brown	-0.3	QM
012	C	Stairs	Rgt	Treads	I	Metal	Yellow	5.8	QM
013	C	Stairs	Rgt	Railing cap	I	Metal	Brown	1.5	QM
014	C	Column	Ctr	U column	I	Metal	Yellow	1.0	QM
Calibration Readings									
015								1.0	TC
016								1.2	TC
017								1.1	TC

---- End of Readings ----

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/30/03 USDB Castle, Building 475
 Report Date: 6/5/03 Exterior
 Abatement Level: 1.0
 Report No. S#01442 - 05/30/03 10:34
 Total Reading Sets: 14
 Job Started: 05/30/03 10:34
 Job Finished: 05/30/03 11:16

Structure	Total	----- Structure Distribution -----			
		Positive	Negative	Inconclusive	
Column U column	2	0 <0%>	1 <50%>	1 <50%>	
Door Lft casing	2	0 <0%>	2 <100%>	0 <0%>	
Door U Rgt	2	0 <0%>	2 <100%>	0 <0%>	
Fire Es Ldr	1	0 <0%>	1 <100%>	0 <0%>	
Framework	1	0 <0%>	1 <100%>	0 <0%>	
Gate	1	0 <0%>	1 <100%>	0 <0%>	
Railing Railing	3	1 <33%>	2 <67%>	0 <0%>	
Stairs Railing cap	1	1 <100%>	0 <0%>	0 <0%>	
Stairs Treads	1	1 <100%>	0 <0%>	0 <0%>	
Inspection Totals:	14	3 < 21%>	10 < 71%>	1 < 7%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/29/03 13:27

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
West Kitchen Addition

INSPECTION DATE: 05/29/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

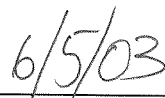
OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Suite 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/5/03 West Kitchen Addition
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 13:27
 Total Readings: 15
 Job Started: 05/29/03 13:27
 Job Finished: 05/29/03 14:01

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
1	001	SB CRS HALL	B	Wall	U	Rgt	I	Block	White	0.0	QM
2	001	SB CRS HALL	B	Door		Ctr Rgt casing	I	Metal	White	0.4	QM
3	001	SB CRS HALL	B	Door		Ctr U Rgt	I	Metal	White	-0.3	QM
4	002	SB W Hall	B	Wall	U	Lft	I	Block	White	0.0	QM
5	002	SB W Hall	B	Door		Lft Lft casing	I	Metal	White	1.6	QM
6	002	SB W Hall	B	Door		Ctr U Ctr	I	Metal	White	0.0	QM
7	003	SB Stairs	D	Wall	U	Ctr	I	Block	White	0.0	QM
8	003	SB Stairs	D	Door		Rgt Lft casing	I	Metal	White	-0.3	QM
9	003	SB Stairs	D	Door		Lft U Lft	I	Metal	White	-0.3	QM
10	003	SB Stairs	D	Stairs		Lft Risers	I	Metal	Yellow	2.3	QM
11	004	1 FL NW RM	A	Wall	U	Ctr	I	Drywall	White	0.0	QM
12	005	1 N Mess	C	Column		Ctr	I	Concrete	Red	0.2	QM
13	006	1 Kitchen	B	Wall	U	Ctr	I	Concrete	White	0.2	QM
14	006	1 Kitchen	B	Window		Rgt Sill	I	Metal	Red	-0.1	QM
15	006	1 Kitchen	B	Door		Rgt U Rgt	I	Metal	Gray	-0.1	QM
---- End of Readings ----											

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
Report Date: 6/5/03 West Kitchen Addition
Abatement Level: 1.0
Report No. S#01442 - 05/29/03 13:27
Total Readings: 15 Actionable: 2
Job Started: 05/29/03 13:27
Job Finished: 05/29/03 14:01

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 002 SB W Hall									
005	B	Door	Lft	Lft casing	I	Metal	White	1.6	QM
Interior Room 003 SB Stairs									
010	D	Stairs	Lft	Risers	I	Metal	Yellow	2.3	QM
---- End of Readings ----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/5/03 West Kitchen Addition
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 13:27
 Total Readings: 15
 Job Started: 05/29/03 13:27
 Job Finished: 05/29/03 14:01

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB CRS HALL									
001	B	Wall	U Rgt		I	Block	White	0.0	QM
002	B	Door	Ctr	Rgt casing	I	Metal	White	0.4	QM
003	B	Door	Ctr	U Rgt	I	Metal	White	-0.3	QM
Interior Room 002 SB W Hall									
004	B	Wall	U Lft		I	Block	White	0.0	QM
006	B	Door	Ctr	U Ctr	I	Metal	White	0.0	QM
005	B	Door	Lft	Lft casing	I	Metal	White	1.6	QM
Interior Room 003 SB Stairs									
007	D	Wall	U Ctr		I	Block	White	0.0	QM
009	D	Door	Lft	U Lft	I	Metal	White	-0.3	QM
008	D	Door	Rgt	Lft casing	I	Metal	White	-0.3	QM
010	D	Stairs	Lft	Risers	I	Metal	Yellow	2.3	QM
Interior Room 004 1 FL NW RM									
011	A	Wall	U Ctr		I	Drywall	White	0.0	QM
Interior Room 005 1 N Mess									
012	C	Column	Ctr		I	Concrete	Red	0.2	QM
Interior Room 006 1 Kitchen									
013	B	Wall	U Ctr		I	Concrete	White	0.2	QM
014	B	Window	Rgt	Sill	I	Metal	Red	-0.1	QM
015	B	Door	Rgt	U Rgt	I	Metal	Gray	-0.1	QM
---- End of Readings ----									

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/5/03 West Kitchen Addition
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 13:27
 Total Reading Sets: 15
 Job Started: 05/29/03 13:27
 Job Finished: 05/29/03 14:01

Structure	Total	----- Structure Distribution -----			
		Positive	Negative	Inconclusive	
Column	1	0 <0%>	1 <100%>	0 <0%>	
Door Lft casing	2	1 <50%>	1 <50%>	0 <0%>	
Door Rgt casing	1	0 <0%>	1 <100%>	0 <0%>	
Door U Ctr	1	0 <0%>	1 <100%>	0 <0%>	
Door U Lft	1	0 <0%>	1 <100%>	0 <0%>	
Door U Rgt	2	0 <0%>	2 <100%>	0 <0%>	
Stairs Risers	1	1 <100%>	0 <0%>	0 <0%>	
Wall	5	0 <0%>	5 <100%>	0 <0%>	
Window Sill	1	0 <0%>	1 <100%>	0 <0%>	
Inspection Totals:	15	2 < 13%>	13 < 87%>	0 < 0%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/29/03 14:21

INSPECTION FOR: Bibb and Associates
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
East Kitchen Addition

INSPECTION DATE: 05/29/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

OPERATOR LICENSE: KS00-4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Suite 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/5/03 East Kitchen Addition
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 14:21
 Total Readings: 13
 Job Started: 05/29/03 14:21
 Job Finished: 05/29/03 14:47

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
1	001	SB CRS HALL	D	Wall	U	Ctr	I	Block	Yellow	0.0	QM
2	001	SB CRS HALL	D	Wall	U	Rgt	I	Concrete	Yellow	0.0	QM
3	001	SB CRS HALL	D	Door	Ctr	Rgt casing	I	Metal	White	0.2	QM
4	001	SB CRS HALL	D	Door	Ctr	U Lft	I	Metal	White	-0.2	QM
5	002	1 N Mess	C	Column	Ctr		I	Concrete	White	0.0	QM
6	002	1 N Mess	D	Wall	U	Ctr	I	Block	White	0.0	QM
7	002	1 N Mess	D	Door	Rgt	Lft casing	I	Metal	White	-0.2	QM
8	002	1 N Mess	D	Door	Rgt	U Rgt	I	Metal	White	-0.2	QM
9	003	1 Kitchen	D	Wall	U	Rgt	I	Concrete	White	0.0	QM
10	003	1 Kitchen	A	Wall	U	Lft	I	Drywall	White	0.4	QM
11		CALIBRATION								1.1	TC
12		CALIBRATION								1.0	TC
13		CALIBRATION								1.2	TC
---- End of Readings ----											

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates

Inspection Date: 05/29/03 USDB Castle, Building 475
Report Date: 6/5/03 East Kitchen Addition
Abatement Level: 1.0
Report No. S#01442 - 05/29/03 14:21
Total Readings: 13 Actionable: 0
Job Started: 05/29/03 14:21
Job Finished: 05/29/03 14:47

Reading			Paint			Lead		
No.	Wall	Structure	Location	Member	Cond	Substrate	Color	(mg/cm ²) Mode
Calibration Readings								
----- End of Readings -----								

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/5/03 East Kitchen Addition
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 14:21
 Total Readings: 13
 Job Started: 05/29/03 14:21
 Job Finished: 05/29/03 14:47

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB CRS HALL									
001	D	Wall	U Ctr		I	Block	Yellow	0.0	QM
002	D	Wall	U Rgt		I	Concrete	Yellow	0.0	QM
003	D	Door	Ctr	Rgt casing	I	Metal	White	0.2	QM
004	D	Door	Ctr	U Lft	I	Metal	White	-0.2	QM
Interior Room 002 1 N Mess									
005	C	Column	Ctr		I	Concrete	White	0.0	QM
006	D	Wall	U Ctr		I	Block	White	0.0	QM
007	D	Door	Rgt	Lft casing	I	Metal	White	-0.2	QM
008	D	Door	Rgt	U Rgt	I	Metal	White	-0.2	QM
Interior Room 003 1 Kitchen									
010	A	Wall	U Lft		I	Drywall	White	0.4	QM
009	D	Wall	U Rgt		I	Concrete	White	0.0	QM
Calibration Readings									
011								1.1	TC
012								1.0	TC
013								1.2	TC
----- End of Readings -----									

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates

Inspection Date: 05/29/03 USDB Castle, Building 475
 Report Date: 6/5/03 East Kitchen Addition
 Abatement Level: 1.0
 Report No. S#01442 - 05/29/03 14:21
 Total Reading Sets: 10
 Job Started: 05/29/03 14:21
 Job Finished: 05/29/03 14:47

Structure	Total	----- Structure Distribution -----			
		Positive	Negative	Inconclusive	
Column	1	0 <0%>	1 <100%>	0 <0%>	
Door Lft casing	1	0 <0%>	1 <100%>	0 <0%>	
Door Rgt casing	1	0 <0%>	1 <100%>	0 <0%>	
Door U Lft	1	0 <0%>	1 <100%>	0 <0%>	
Door U Rgt	1	0 <0%>	1 <100%>	0 <0%>	
Wall	5	0 <0%>	5 <100%>	0 <0%>	
Inspection Totals:	10	0 < 0%>	10 <100%>	0 < 0%>	

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01442 - 05/30/03 08:45

INSPECTION FOR: Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, Kansas 66214

PERFORMED AT: USDB Castle, Building 475
Rotunda

INSPECTION DATE: 05/30/03

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01442

ACTION LEVEL: 1.0 mg/cm²

OPERATOR LICENSE: KS00=4010

SIGNED: _____



Lance Tomlin
Senior Project Manager
APEX Environmental Consultants
8600 W. 110th St., Suite 120
Overland Park, Kansas 66210

Date: _____



SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/30/03 USDB Castle, Building 475
 Report Date: 6/5/03 Rotunda
 Abatement Level: 1.0
 Report No. S#01442 - 05/30/03 08:45
 Total Readings: 52
 Job Started: 05/30/03 08:45
 Job Finished: 05/30/03 10:29

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
1		CALIBRATION								1.2	TC
2		CALIBRATION								1.0	TC
3		CALIBRATION								1.1	TC
4	001	SB PIPE COR	A	Wall	U Ctr		I	Brick	White	-0.1	QM
5	001	SB PIPE COR	C	Wall	L Ctr		I	Concrete	White	0.0	QM
6	001	SB PIPE COR	C	Fireline	Ctr		I	Metal	Red	0.0	QM
7	002	SB W AHU	B	Wall	L Ctr		I	Brick	Gray	0.0	QM
8	002	SB W AHU	C	Column	Ctr		I	Metal	Red	8.8	QM
9	002	SB W AHU	C	Fan Unit	Ctr		I	Metal	Gray	1.0	QM
10	003	SB E AHU	D	Wall	U Rgt		I	Brick	Gray	0.0	QM
11	003	SB E AHU	D	Fan Unit	Rgt		I	Metal	Gray	1.7	QM
12	004	BS ROTUN HL	A	Wall	L Ctr		I	Brick	Yellow	2.4	QM
13	004	BS ROTUN HL	A	Floor			I	Concrete	Black	0.1	QM
14	004	BS ROTUN HL	B	Radiator	Ctr		I	Metal	Gray	4.1	QM
15	004	BS ROTUN HL	B	Door	Ctr U Rgt		I	Metal	White	>9.9	QM
16	005	ROTUN EL RM	C	Wall	L Lft		I	Brick	Brown	8.8	QM
17	005	ROTUN EL RM	C	Door	Ctr U Lft		I	Metal	Black	5.6	QM
18	005	ROTUN EL RM	C	Floor			I	Concrete	Red	0.2	QM
19	006	B NE Room	A	Wall	L Ctr		I	Brick	White	-0.2	QM
20	006	B NE Room	A	Wall	L Ctr		I	Drywall	Yellow	0.0	QM
21	007	B S Room	C	Wall	U Ctr		I	Block	Yellow	0.0	QM
22	007	B S Room	C	Wall	L Ctr		I	Block	Red	0.0	QM
23	007	B S Room	C	Door	Ctr Rgt casing		I	Metal	Red	0.3	QM
24	007	B S Room	B	Column	Ctr L column		I	Metal	Black	>9.9	QM
25	007	B S Room	A	Wall	L Lft		I	Brick	Yellow	0.1	QM
26	007	B S Room	A	Door	Ctr Lft casing		I	Metal	Yellow	1.0	QM
27	007	B S Room	A	Gate	Ctr		I	Metal	Yellow	2.2	QM
28	008	1 FL ROTUND	A	Wall	U Ctr		I	Plaster	Yellow	1.7	QM
29	008	1 FL ROTUND	A	Floor			I	Concrete	Red	0.0	QM
30	008	1 FL ROTUND	A	Door	Ctr Rgt casing		I	Metal	Red	-0.2	QM
31	008	1 FL ROTUND	A	Gate	Ctr		I	Metal	Red	1.0	QM
32	008	1 FL ROTUND	A	Door	Ctr Rgt casing		I	Metal	White	7.3	QM
33	008	1 FL ROTUND	A	Door	Rgt U Rgt		I	Metal	White	5.9	QM
34	009	1 Control	A	Wall	U Rgt		I	Block	Yellow	0.0	QM
35	009	1 Control	A	Wall	L Rgt		I	Block	Brown	-0.1	QM
36	009	1 Control	A	Gate	Ctr		I	Metal	Brown	5.3	QM
37	009	1 Control	A	Door	Ctr Lft casing		I	Metal	Red	-0.1	QM
38	009	1 Control	A	Door	Lft U Lft		I	Metal	Red	-0.1	QM
39	009	1 Control	A	Window	Rgt Lft casing		I	Metal	Yellow	-0.2	QM
40	009	1 Control	A	I-Beam	Ctr		I	Metal	Brown	>9.9	QM
41	010	2 Control	A	Ductwork	Rgt		I	Metal	White	0.1	QM
42	010	2 Control	A	Ceiling			I	Metal	White	1.7	QM
43	011	2 FL RTNDA	A	Wall	L Ctr		I	Plaster	Yellow	0.1	QM
44	011	2 FL RTNDA	A	Window	Rgt Rgt casing		I	Wood	Red	3.5	QM
45	011	2 FL RTNDA	A	Gate	Ctr		I	Metal	Red	7.0	QM
46	011	2 FL RTNDA	A	Railing	Ctr Railing		I	Metal	Red	-0.3	QM
47	011	2 FL RTNDA	A	Railing	Ctr Balusters		I	Metal	White	-0.3	QM

SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
48	012	3 FL RTNDA	C	Door		Ctr Lft casing	I	Wood	Green	>9.9	QM
49	012	3 FL RTNDA	C	Door		Ctr U Rgt	I	Wood	Green	>9.9	QM
50	012	3 FL RTNDA	A	Wall		U Ctr	I	Plaster	White	0.0	QM
51	012	3 FL RTNDA	A	Baseboard		Rgt	I	Concrete	Red	3.2	QM
52	012	3 FL RTNDA	A	Window		Lft Sill	I	Wood	Red	1.9	QM
---- End of Readings ----											

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/30/03 USDB Castle, Building 475
 Report Date: 6/5/03 Rotunda
 Abatement Level: 1.0
 Report No. S#01442 - 05/30/03 08:45
 Total Readings: 52 Actionable: 24
 Job Started: 05/30/03 08:45
 Job Finished: 05/30/03 10:29

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 002 SB W AHU									
008	C	Column	Ctr		I	Metal	Red	8.8	QM
009	C	Fan Unit	Ctr		I	Metal	Gray	1.0	QM
Interior Room 003 SB E AHU									
011	D	Fan Unit	Rgt		I	Metal	Gray	1.7	QM
Interior Room 004 BS ROTUN HL									
012	A	Wall	L Ctr		I	Brick	Yellow	2.4	QM
015	B	Door	Ctr	U Rgt	I	Metal	White	>9.9	QM
014	B	Radiator	Ctr		I	Metal	Gray	4.1	QM
Interior Room 005 ROTUN EL RM									
016	C	Wall	L Lft		I	Brick	Brown	8.8	QM
017	C	Door	Ctr	U Lft	I	Metal	Black	5.6	QM
Interior Room 007 B S Room									
026	A	Door	Ctr	Lft casing	I	Metal	Yellow	1.0	QM
027	A	Gate	Ctr		I	Metal	Yellow	2.2	QM
024	B	Column	Ctr	L column	I	Metal	Black	>9.9	QM
Interior Room 008 1 FL ROTUND									
028	A	Wall	U Ctr		I	Plaster	Yellow	1.7	QM
032	A	Door	Ctr	Rgt casing	I	Metal	White	7.3	QM
033	A	Door	Rgt	U Rgt	I	Metal	White	5.9	QM
031	A	Gate	Ctr		I	Metal	Red	1.0	QM
Interior Room 009 1 Control									
036	A	Gate	Ctr		I	Metal	Brown	5.3	QM
040	A	I-Beam	Ctr		I	Metal	Brown	>9.9	QM
Interior Room 010 2 Control									
042	A	Ceiling			I	Metal	White	1.7	QM
Interior Room 011 2 FL RTNDA									
044	A	Window	Rgt	Rgt casing	I	Wood	Red	3.5	QM
045	A	Gate	Ctr		I	Metal	Red	7.0	QM
Interior Room 012 3 FL RTNDA									
051	A	Baseboard	Rgt		I	Concrete	Red	3.2	QM
052	A	Window	Lft	Sill	I	Wood	Red	1.9	QM
048	C	Door	Ctr	Lft casing	I	Wood	Green	>9.9	QM
049	C	Door	Ctr	U Rgt	I	Wood	Green	>9.9	QM

Calibration Readings

---- End of Readings ----

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/30/03 USDB Castle, Building 475
 Report Date: 6/5/03 Rotunda
 Abatement Level: 1.0
 Report No. S#01442 - 05/30/03 08:45
 Total Readings: 52
 Job Started: 05/30/03 08:45
 Job Finished: 05/30/03 10:29

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Interior Room 001 SB PIPE COR									
004	A	Wall	U Ctr		I	Brick	White	-0.1	QM
005	C	Wall	L Ctr		I	Concrete	White	0.0	QM
006	C	Fireline	Ctr		I	Metal	Red	0.0	QM
Interior Room 002 SB W AHU									
007	B	Wall	L Ctr		I	Brick	Gray	0.0	QM
008	C	Column	Ctr		I	Metal	Red	8.8	QM
009	C	Fan Unit	Ctr		I	Metal	Gray	1.0	QM
Interior Room 003 SB E AHU									
010	D	Wall	U Rgt		I	Brick	Gray	0.0	QM
011	D	Fan Unit	Rgt		I	Metal	Gray	1.7	QM
Interior Room 004 BS ROTUN HL									
012	A	Wall	L Ctr		I	Brick	Yellow	2.4	QM
013	A	Floor			I	Concrete	Black	0.1	QM
015	B	Door	Ctr	U Rgt	I	Metal	White	>9.9	QM
014	B	Radiator	Ctr		I	Metal	Gray	4.1	QM
Interior Room 005 ROTUN EL RM									
016	C	Wall	L Lft		I	Brick	Brown	8.8	QM
018	C	Floor			I	Concrete	Red	0.2	QM
017	C	Door	Ctr	U Lft	I	Metal	Black	5.6	QM
Interior Room 006 B NE Room									
019	A	Wall	L Ctr		I	Brick	White	-0.2	QM
020	A	Wall	L Ctr		I	Drywall	Yellow	0.0	QM
Interior Room 007 B S Room									
025	A	Wall	L Lft		I	Brick	Yellow	0.1	QM
026	A	Door	Ctr	Lft casing	I	Metal	Yellow	1.0	QM
027	A	Gate	Ctr		I	Metal	Yellow	2.2	QM
024	B	Column	Ctr	L column	I	Metal	Black	>9.9	QM
022	C	Wall	L Ctr		I	Block	Red	0.0	QM
021	C	Wall	U Ctr		I	Block	Yellow	0.0	QM
023	C	Door	Ctr	Rgt casing	I	Metal	Red	0.3	QM
Interior Room 008 1 FL ROTUND									
028	A	Wall	U Ctr		I	Plaster	Yellow	1.7	QM
029	A	Floor			I	Concrete	Red	0.0	QM
030	A	Door	Ctr	Rgt casing	I	Metal	Red	-0.2	QM
032	A	Door	Ctr	Rgt casing	I	Metal	White	7.3	QM
033	A	Door	Rgt	U Rgt	I	Metal	White	5.9	QM
031	A	Gate	Ctr		I	Metal	Red	1.0	QM
Interior Room 009 1 Control									
035	A	Wall	L Rgt		I	Block	Brown	-0.1	QM
034	A	Wall	U Rgt		I	Block	Yellow	0.0	QM
039	A	Window	Rgt	Lft casing	I	Metal	Yellow	-0.2	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
038	A	Door	Lft	U Lft	I	Metal	Red	-0.1	QM
037	A	Door	Ctr	Lft casing	I	Metal	Red	-0.1	QM
036	A	Gate	Ctr		I	Metal	Brown	5.3	QM
040	A	I-Beam	Ctr		I	Metal	Brown	>9.9	QM
Interior Room 010 2 Control									
042	A	Ceiling			I	Metal	White	1.7	QM
041	A	Ductwork	Rgt		I	Metal	White	0.1	QM
Interior Room 011 2 FL RTNDA									
043	A	Wall	L Ctr		I	Plaster	Yellow	0.1	QM
044	A	Window	Rgt	Rgt casing	I	Wood	Red	3.5	QM
047	A	Railing	Ctr	Balusters	I	Metal	White	-0.3	QM
046	A	Railing	Ctr	Railing	I	Metal	Red	-0.3	QM
045	A	Gate	Ctr		I	Metal	Red	7.0	QM
Interior Room 012 3 FL RTNDA									
050	A	Wall	U Ctr		I	Plaster	White	0.0	QM
051	A	Baseboard	Rgt		I	Concrete	Red	3.2	QM
052	A	Window	Lft	Sill	I	Wood	Red	1.9	QM
048	C	Door	Ctr	Lft casing	I	Wood	Green	>9.9	QM
049	C	Door	Ctr	U Rgt	I	Wood	Green	>9.9	QM
Calibration Readings									
001								1.2	TC
002								1.0	TC
003								1.1	TC
---- End of Readings ----									

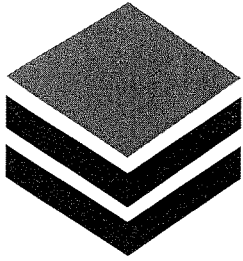
DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Bibb and Associates, Inc.

Inspection Date: 05/30/03 USDB Castle, Building 475
 Report Date: 6/5/03 Rotunda
 Abatement Level: 1.0
 Report No. S#01442 - 05/30/03 08:45
 Total Reading Sets: 49
 Job Started: 05/30/03 08:45
 Job Finished: 05/30/03 10:29

Structure	Total	Structure Distribution			
		Positive	Negative	Inconclusive	
Baseboard	1	1 <100%>	0 <0%>	0 <0%>	
Ceiling	1	1 <100%>	0 <0%>	0 <0%>	
Column	1	1 <100%>	0 <0%>	0 <0%>	
Column L column	1	1 <100%>	0 <0%>	0 <0%>	
Door Lft casing	3	1 <33%>	1 <33%>	1 <33%>	
Door Rgt casing	3	1 <33%>	2 <67%>	0 <0%>	
Door U Lft	2	1 <50%>	1 <50%>	0 <0%>	
Door U Rgt	3	3 <100%>	0 <0%>	0 <0%>	
Ductwork	1	0 <0%>	1 <100%>	0 <0%>	
Fan Unit	2	1 <50%>	0 <0%>	1 <50%>	
Fireline	1	0 <0%>	1 <100%>	0 <0%>	
Floor	3	0 <0%>	3 <100%>	0 <0%>	
Gate	4	3 <75%>	0 <0%>	1 <25%>	
I-Beam	1	1 <100%>	0 <0%>	0 <0%>	
Radiator	1	1 <100%>	0 <0%>	0 <0%>	
Railing Balusters	1	0 <0%>	1 <100%>	0 <0%>	
Railing Railing	1	0 <0%>	1 <100%>	0 <0%>	
Wall	16	3 <19%>	13 <81%>	0 <0%>	
Window Lft casing	1	0 <0%>	1 <100%>	0 <0%>	
Window Rgt casing	1	1 <100%>	0 <0%>	0 <0%>	
Window Sill	1	1 <100%>	0 <0%>	0 <0%>	
Inspection Totals:	49	21 < 43%>	25 < 51%>	3 < 6%>	

APPENDIX V

INSPECTOR'S CERTIFICATIONS



M·E·T·A

Mayhew Environmental Training Associates

I N C O R P O R A T E D

Certificate # 7ME01227501IR011

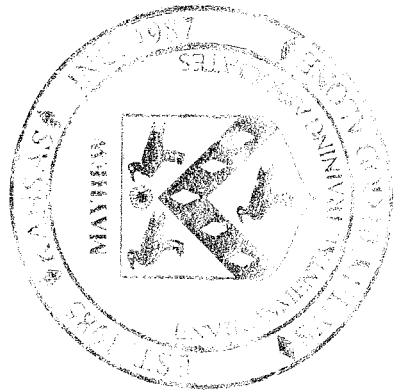
This is to certify that

Lance Tomlin

*has on 01/22/03, in LAWRENCE, KS
completed the requirements for asbestos accreditation under Section 206 of TSCA, Title II, 15 U.S.C. 2646*

AHERA Asbestos Inspector Refresher Training

*as approved by the U.S.E.P.A. under 40 C.F.R. 763 (AHERA)
on 01/22/03 - 01/22/03 and passed the associated examination on 01/22/03
with a score of 70% or better
CM = 0.5 PTS.*

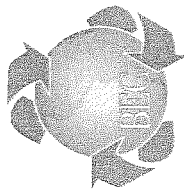


[Signature]
Instructor

[Signature]
President

Soc. Sec #: 509-70-5228
Accreditation Expires: 01/22/04

META - P.O. Box 786 - Lawrence KS 66044 - 800-444-6382



BAKER ENVIRONMENTAL CONSULTING, INC.

Nationwide Training and Consulting for the Detection and Control of Environmental Hazards

Lance Tomlin

has successfully completed a professional training course and passed an exam with a score of at least 70%

LEAD HAZARD RISK ASSESSOR REFRESHER

Certificate #: LHRAR012202-04

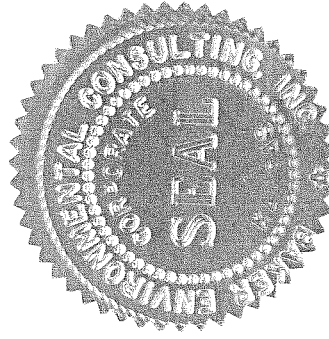
Interim Certification Expiration Date: July 22, 2002

Attendee's Listed Address: Box 442336; Lawrence, Kansas 66044

Course Dates: January 22, 2002

Exam Date: January 22, 2002

Unique Identifying #: 0150970522822



Training Course Instructor
www.bakerenvironmental.com

7941 Westgate Street * Lenexa, Kansas 66215-2636 * (913) 541-0220 * (913) 541-0457 (fax)

Kansas Department of Health and Environment

Be it known, that having properly filed application with the Kansas Department of Health and Environment,

Lance Tomlin

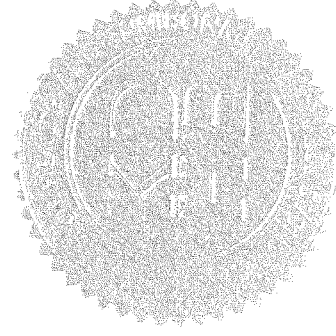
is hereby certified as a

Risk Assessor

Certification Number: KS00-4010

Date: June 12, 2002

Expiration Date: June 12, 2004



A handwritten signature in dark ink, appearing to read "Clyde D. Graeber".

Clyde D. Graeber
Secretary

Certificate of Achievement

This is to certify that

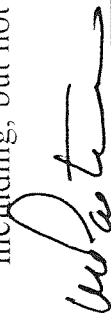
Lance Tomlin

of APEX Environmental Consulting, Inc.

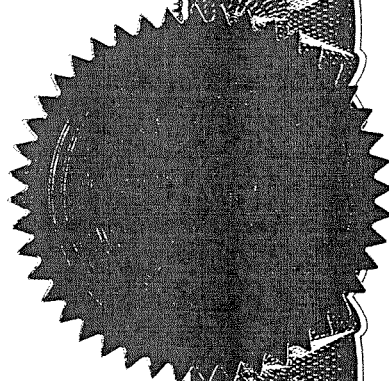
on the 31st day of March 2000 successfully completed the factory training for

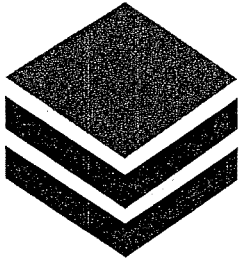
RMD's LPA-1 Lead Paint Inspection System

including, but not limited to, the topics of Radiation Safety and the Proper Use of the Instrument.



Jacob Paster, Vice President, RMD
44 Hunt St., Watertown, Massachusetts





M·E·T·A

Mayhew Environmental Training Associates

I N C O R P O R A T E D

Certificate # 7ME12047404IR031

This is to certify that

Mitch Landreth

*has on 12/04/02, in LAWRENCE, KS
completed the requirements for asbestos accreditation under Section 206 of TSCA, Title II, 15 U.S.C. 2646*

AHERA Asbestos Inspector Refresher Training

*as approved by the U.S.E.P.A. under 40 C.F.R. 763 (AHERA)
on 12/04/02 - 12/04/02 and passed the associated examination on 12/04/02
with a score of 70% or better*

CM = 0.5 PTS.



Robert J. Lee

Instructor

R. Brubaker

President

Soc. Sec #: 510-66-9408
Accreditation Expires: 12/04/03

META - P.O. Box 786 - Lawrence KS 66044 - 800-444-6382



BAKER ENVIRONMENTAL CONSULTING, INC.

Nationwide Training and Consulting for the Detection and Control of Environmental Hazards

Mitch J. Landreth

has successfully completed a professional training course and passed an exam with a score of at least 70%

LEAD HAZARD RISK ASSESSOR

Certificate #: LHRA041902-10

Interim Certification Expiration Date: October 19, 2002

Attendee's Listed Address: 4800 College Boulevard; Overland Park, Kansas 66621

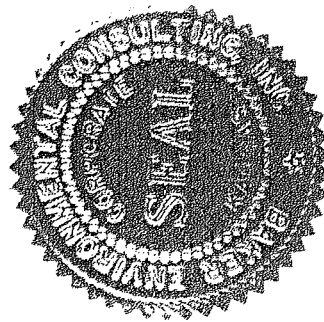
Course Dates: April 18 - 19, 2002

Exam Date: April 19, 2002

Unique Identifying #: 0451066940519

[Signature]

Training Course Instructor
www.bakerenvironmental.com



7941 Westgate Street * Lenexa, Kansas 66215-2636 * (913) 541-0220 * (913) 541-0457 (fax)

Kansas Department of Health and Environment

Be it known, that having properly filed application with the Kansas Department of Health and Environment,

Mitchell Landreth

is hereby certified as a


Lead Inspector

Certification Number: KS00-3025

Date: March 18, 2002

Expiration Date: March 18, 2004




Clyde D. Graeber
Secretary

Certificate of Achievement

This is to certify that

Mitch Landreth

of APEX Environmental Consulting, Inc.

on the 31st day of March 2000 successfully completed the factory training for

RMD's LPA-1 Lead Paint Inspection System

including, but not limited to, the topics of Radiation Safety and the Proper Use of the Instrument.



Jacob Paster

Jacob Paster, Vice President, RMD
44 Hunt St., Watertown, Massachusetts

APPENDIX VI
PRE-DEMOLITION ASBESTOS ROOFING SURVEY

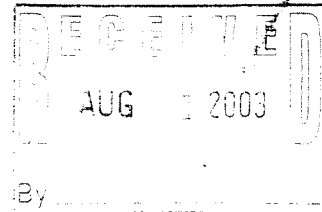
PRE-DEMOLITION ASBESTOS ROOFING SURVEY



PERFORMED AT:

**USDB CASTLE
BUILDING 475**

FT. LEAVENWORTH, KANSAS



PREPARED FOR:

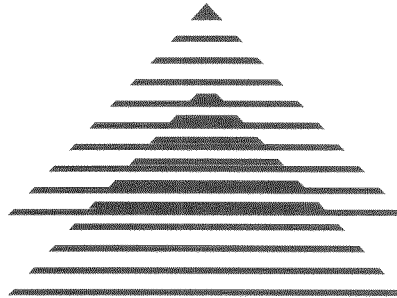
**MR. PHIL PETERSON, P.E.
BIBB AND ASSOCIATES, INC.**

PREPARED BY:

APEX ENVIRONMENTAL CONSULTANTS, INC.
8600 W. 110TH STREET, SUITE 120
OVERLAND PARK, KANSAS 66210
TEL: (913) 338-APEX FAX: (913) 338-2741
WWW.4APEX.COM

APEX PROJECT NO. 30213E
JULY 30, 2003

PRE-DEMOLITION ASBESTOS ROOFING SURVEY



PERFORMED AT:

**USDB CASTLE
BUILDING 475
FT. LEAVENWORTH, KANSAS**

PREPARED FOR:

**MR. PHIL PETERSON, P.E.
PROJECT MANAGER
BIBB AND ASSOCIATES, INC.
8455 LENEXA DRIVE
LENEXA, KS 66214**

PREPARED BY:

***APEX ENVIRONMENTAL CONSULTANTS, INC.*
8600 W. 110TH STREET, SUITE 120
OVERLAND PARK, KANSAS 66210
TEL: (913) 338-APEX FAX: (913) 338-2741
WWW.4APEX.COM**

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CLIENT:

Mr. Phil Peterson, P.E.
Project Manager
Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, KS 66214

Tel: 913-928-7000
Fax: 913-928-7500

PROJECT:

Pre-Demolition Asbestos Roofing Survey Report
USDB Castle, Building 475
Fort Leavenworth, Kansas

APEX Project No. 30213E

ENVIRONMENTAL CONSULTANT:

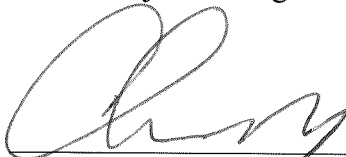
APEX ENVIRONMENTAL CONSULTANTS, INC.

Inspector:



Lance Tomlin
Senior Project Manager

Reviewer:



Christopher S. Frey
Vice President

Address: 8600 W. 110th Street, Suite 120
Overland Park, Kansas 66210
Tel: (913) 338-APEX Fax: (913) 338-2741
e-mail: LTomlin@4apex.com

1.0 EXECUTIVE SUMMARY

On July 2, 2003, APEX Environmental Consultants (APEX), Inc. conducted a survey for asbestos-containing materials (ACM) on the roofs at the USDB Castle, Building 475 located at Fort Leavenworth, Kansas. Lance Tomlin of APEX performed the survey. Mr. Tomlin's EPA Asbestos Inspector Certification Number is 7ME01227501R011. A copy of this certification is included in Appendix V.

The intent of the ACM survey was to positively identify ACM in roofing materials on the building. Such information includes locations and quantities of known ACM. This report has been compiled for Bibb and Associates, Inc. based on the authorization of Phil Peterson, Project Manager.

Previous interior inspection results, which include ACM and Lead-Based Paint (LBP) locations and quantities, were presented in a report dated June 6, 2003.

2.0 ACM SURVEY METHODOLOGY

The asbestos survey of the facilities was performed in accordance with the Environmental Protection Agency's (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAP), (ref: 40 CFR, Part 61), utilizing the AHERA assessment, sampling, and analytical protocols (ref: 40 CFR 763). No previous survey information was available for review.

Suspect materials were grouped together into homogeneous sampling areas. A homogeneous sampling area contains material that is uniform in texture and color and appears to be identical in every other respect. Building materials that were installed at

different times or that do not appear to be similar in any other way are considered separate homogeneous materials/areas.

Bulk samples were collected of suspect ACM in order to determine the presence of asbestos. The bulk samples were sent to Schneider Laboratories, an independent NVLAP-accredited laboratory, for analysis. The samples were analyzed using polarized light microscopy (PLM) coupled with dispersion staining techniques in accordance with Appendix A to Subpart F of 40 CFR Part 763 (1982). For your information, the EPA considers a material to be asbestos-containing if it contains greater than one percent (1%) asbestos fibers. OSHA regulations cover materials containing asbestos in any concentration. Please refer to the bulk sample analytical data found in Appendix II of this report.

The EPA considers the following materials to be non-suspect ACM, and consequently, they were not sampled:

- Glass
- Metal
- Concrete
- Brick
- Fiberglass
- Rubber
- Foam

The data contained in this report has been compiled based upon visible and accessible materials. Without complete access to all walls/pipe chases and ceiling cavities, 100% accuracy in the following data is not possible.

3.0 RESULTS OF SURVEYS

A total of six (6) bulk samples were collected from suspect ACM during the roofing materials survey. Analytical data indicates that the following suspect materials tested *positive* for asbestos:

- Perimeter Flashing.

The following suspect materials tested *negative* for asbestos:

- Tar on Roof Decking.

Please refer to the ACM inventory spreadsheet, located in Appendix I, which lists the specific locations and quantities for ACM on the roof of the USDB Castle, Building 475.

4.0 RECOMMENDATIONS

Due to multiple federal and State of Kansas regulations governing the disturbance, employee exposure, and disposal of ACM APEX recommends that all ACM be properly addressed prior to the start of demolition activities. A KDHE-licensed asbestos abatement contractor should remove all of the ACM that is designated for removal as part of the project.

Nonfriable ACM (perimeter flashing) may be removed by a general contractor; however, APEX recommends that a licensed abatement contractor perform the removal.

ATTACHMENT VI-A
ASBESTOS MATERIALS INVENTORY

Asbestos Materials Inventory Updated 7-30-03				USDB Castle, Building 475 Ft. Leavenworth, Kansas				
Location	Level	Room/Area	Material	Size	Qty.	Units	Sample #	Comments
1 Wing	Bsmt.	Southwest Room	Floor Tile & Mastic	9"	425	SF	34, 35	Green/White Interlaid, Under carpet.
1 Wing	Bsmt.	Northwest Storage Room	Black Tar Pipe Wrap	<4"	18	LF	37	
1 Wing	Bsmt.	Southeast Room	Floor Tile & Mastic	12"	450	SF	38	Beige, Under carpet.
1 Wing	Bsmt.	East Center Room	Floor Tile & Mastic	12"	250	SF	38	Beige, Under carpet.
1 Wing	First	West Center Room	Floor Tile & Mastic	9"	210	SF	40	Green, Under carpet.
1 Wing	First	Southwest Room	Floor Tile & Mastic	9"	300	SF	40	Green, Under carpet.
1 Wing	First	Northeast Room	Floor Tile & Mastic	9"	125	SF	40	Green
1 Wing	First	East Center Room	Floor Tile & Mastic	9"	210	SF	40	Green
1 Wing	First	Southeast Room	Floor Tile & Mastic	9"	300	SF	40	Green
1 Wing	Second	West Center Room	Floor Tile & Mastic	9"	300	SF	34, 35	Green/White Interlaid, Under carpet.
1 Wing	Second	South Room (Chapel)	Floor Tile & Mastic	9"	1,200	SF	34, 35	Green/White Interlaid, Under carpet.
1 Wing	Second	East Center Room	Floor Tile & Mastic	9"	300	SF	34, 35	Green/White Interlaid, Under carpet.
1 Wing	Second	Northeast Room	Floor Tile & Mastic	9"	280	SF	34, 35	Green/White Interlaid, Under carpet.
1 Wing	Third	South Rooms	Floor Tile & Mastic	9"	1,000	SF	34, 35	Green/White Interlaid
1 Wing	Fourth	Northeast Room	Floor Tile & Mastic	9"	300	SF	44	Tan
1 Wing	Fourth	East Center Room	Floor Tile & Mastic	9"	480	SF	44	Tan
1 Wing	Fourth	East Center Room	Acoustical Tile w/ Glue	1'	750	SF	45	Rows of Holes
1 Wing	Fourth	Southeast Room	Floor Tile & Mastic	9"	480	SF	44	Tan
1 Wing	Fourth	Southeast Room	Acoustical Tile w/ Glue	1'	750	SF	45	Rows of Holes
2 Wing	Second	Chapel (South Room)	Floor Tile & Mastic	9"	1,600	SF	34, 35	Green/White Interlaid, Under carpet.
5 Wing	2Subsmt.	East Stairwell	Fire Door		2	EA	Assumed	
5 Wing	2Subsmt.	East Storage Room	Fire Door		1	EA	Assumed	
5 Wing	2Subsmt.	Center Fan Room	Fire Door		1	EA	Assumed	
5 Wing	2Subsmt.	East Air Duct Passage	Fire Door		1	EA	Assumed	
5 Wing	2Subsmt.	East Air Shaft	Fire Door		1	EA	Assumed	
5 Wing	2Subsmt.	Tunnel #5, Upper Level	Mag Block Pipe Insulation	20" - 24"	12	LF	12, 13	
5 Wing	2Subsmt.	Tunnel #5, Lower Level	Mag Block Pipe Insulation	20" - 24"	6	LF	12, 13	
5 Wing	2Subsmt.	Tunnel to Power Plant	Mag Block Pipe Insulation	10" - 12"	100	LF	Assumed	
5 Wing	Subsmt.	Northeast Stairwell	Fire Door		2	EA	Assumed	
5 Wing	Subsmt.	East HVAC Room	Fire Door		1	EA	Assumed	
5 Wing	Subsmt.	East Hall	Fire Door		3	EA	Assumed	

Asbestos Materials Inventory
Updated 7-30-03

USDB Castle, Building 475
Ft. Leavenworth, Kansas

Location	Level	Room/Area	Material	Size	Qty.	Units	Sample #	Comments
5 Wing	Subbsmt.	Janitor's Room	Fire Door		1	EA	Assumed	
5 Wing	Subbsmt.	FSD (North) Office	Fire Door		1	EA	Assumed	
5 Wing	Subbsmt.	Conference Room	Fire Door		1	EA	Assumed	
5 Wing	Subbsmt.	North Hall	Fire Door		2	EA	Assumed	
5 Wing	Subbsmt.	Northwest Storage Room	Fire Door		1	EA	Assumed	
5 Wing	Subbsmt.	Northwest Stairwell	Fire Door		1	EA	Assumed	
5 Wing	Subbsmt.	Northwest Elevator Area	Fire Door		2	EA	Assumed	
5 Wing	Subbsmt.	Mail (Southwest) Room	Fire Door		1	EA	Assumed	
5 Wing	Bsmt.	Weight Room	Fire Door		2	EA	Assumed	
5 Wing	Bsmt.	Library, Law Annex	Fire Door		1	EA	Assumed	
5 Wing	Bsmt.	Northeast Stairwell	Fire Door		2	EA	Assumed	
5 Wing	Bsmt.	West Storage Room	Fire Door		1	EA	Assumed	
5 Wing	Bsmt.	Rations Room	Fire Door		1	EA	Assumed	
5 Wing	Bsmt.	Northwest Stairwell	Fire Door		1	EA	Assumed	
5 Wing	Bsmt.	Northwest Elevator Area	Fire Door		2	EA	Assumed	
5 Wing	First	Northwest Stairwell	Fire Door		1	EA	Assumed	
5 Wing	First	Northwest Elevator Area	Fire Door		2	EA	Assumed	
5 Wing	First	Northeast Stairwell	Fire Door		2	EA	Assumed	
5 Wing	Second	Stage, North Rooms	Floor Tile & Mastic	9"	525	SF	28	Tan
5 Wing	Fourth	Projection Booth	Floor Tile & Mastic	9"	290	SF	32	White w/ Black Streaks
5 Wing	Fourth	Projection Booth	Electrical Wiring		30	LF	Assumed	On Projectors
5 Wing	Fourth	Projection Booth	Heat Reflectors		2	SF	Assumed	Inside Projectors
8 Wing	Bsmt.	Northeast Cell	Fire Door		1	EA	Assumed	
8 Wing	First	Southwest Rooms	Floor Tile & Mastic	9"	380	SF	34, 35	Green/White Interlaid, Under carpet.
8 Wing	First	Southeast Rooms	Floor Tile & Mastic	12"	350	SF	50	Beige w/ Tan Specks, Under carpet.
8 Wing	Second	Throughout	Floor Tile & Mastic	9"	1,500	SF	28	Tan, Under carpet.
W. Kitchen Add	Subbsmt.	Storage Room	Fire Door		1	EA	Assumed	
W. Kitchen Add	Subbsmt.	Stairwell	Fire Door		1	EA	Assumed	
W. Kitchen Add	Subbsmt.	Elevator Room	Fire Door		1	EA	Assumed	
W. Kitchen Add	Subbsmt.	Refrigerator Room	Fire Door		2	EA	Assumed	
E. Kitchen Add.	Subbsmt.	Storage Room	Fire Door		1	EA	Assumed	

Asbestos Materials Inventory Updated 7-30-03					USDB Castle, Building 475 Ft. Leavenworth, Kansas				
Location	Level	Room/Area	Material	Size	Qty.	Units	Sample #	Comments	
E. Kitchen Add.	Subbsmt.	Stairwell	Fire Door		1	EA	Assumed		
E. Kitchen Add.	Subbsmt.	Elevator Room	Fire Door		1	EA	Assumed		
E. Kitchen Add.	Subbsmt.	Refrigerator Room	Fire Door		2	EA	Assumed		
Rotunda	Bsmt.	Electrical Room	Fire Door		1	EA	Assumed		
Exterior	Roof	Throughout	Perimeter Flashing		6,705	SF	2, 4, 6		

ATTACHMENT VI-B
ASBESTOS BULK SAMPLE RESULTS

1899-03-937



APEX ENVIRONMENTAL CONSULTANTS, INC.

8600 W. 110th Street • Overland Park, Kansas 66210 • (913) 338-2739 • FAX (913) 338-2741

BULK SAMPLE CUSTODY FORM

CLIENT: Bibb and Associates, Inc.

JOB LOCATION: Building 475-USDB Castle
Ft. Leavenworth, Kansas

PROJECT No: 30213E

CONTACT/PHONE: Lance Tomlin (913) 338-2739 Lab No. 1899

DATE	SAMPLE #	LOCATION	MATERIAL	COMMENTS
7-2-03	1	2 Wing, Roof, Center	Roof Tar	
7-2-03	2	2 Wing, North Side, Center	Flashing Tar Paper	
7-2-03	3	4 Wing, South End, East Side	Roof Tar	
7-2-03	4	4 Wing, West Side, South End	Flashing Tar Paper	
7-2-03	5	Rotunda Roof, Southwest Side	Built-Up Roof Deck	
7-2-03	6	Rotunda Roof, Southwest Side	Flashing Tar Paper	

ADDITIONAL REMARKS:

- Please put project number on report.
- Requested Analysis – PLM-DS
- Fax results to (913) 338-2741

TURNAROUND TIME: 3 Day

SAMPLED BY:

Lance Tomlin

PRINTED NAME

Lance Tomlin

SIGNATURE

CUSTODY

Relinquished By:

Lance Tomlin

Received By:

Jeff Lippe

Date:

7/2/03

Date:

7-3 10:00 AM

fedex 792280706835

PLEASE RETURN ORIGINAL TO APEX ENVIRONMENTAL CONSULTANTS, INC.

SCHNEIDER LABORATORIES INCORPORATED

2512 W. Cary Street • Richmond, Virginia • 23220-5117
804-353-6778 • 800-785-LABS (5227) • (FAX) 804-353-6928

Excellence in Service and Technology

AIHA/ELLAP 100527, NVLAP 101150-0, NYELAP/NELAC 11413, CAELAP 2078, NC 593

LABORATORY ANALYSIS REPORT

Asbestos Identification by EPA Method 600/R-93/116

ACCOUNT: 1899-03-937
CLIENT: Apex Environmental Consultants, Inc.
ADDRESS: 8600 W 110th St Ste 120
Overland Park, KS 66210-1805

DATE COLLECTED: 7/ 2/2003
DATE RECEIVED: 7/ 3/2003
DATE ANALYZED: 7/ 7/2003
DATE REPORTED: 7/ 8/2003

PO NO.:
PROJECT NAME: Bldg. 475 USDB
PROJECT NO.: 30213E
JOB LOCATION: Ft. Leavenworth, KS

Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
1	26828133 Layer 1: 100% Non-Asbestos	2 wing roof ctr Roof Tar	No	Black, Bituminous CELLULOSE FIBER 2%, NON FIBROUS MATERIAL 98%
2	26828134 Layer 1: 6% Asbestos 94% Non-Asbestos	2 wing N side ctr Flashing Tar Paper	Yes	Black, Bituminous, Fibrous CHRYSTILE 6% CELLULOSE FIBER 40%, NON FIBROUS MATERIAL 54%
3	26828135 Layer 1: 100% Non-Asbestos	4 wing S end E Roof Tar	No	Black, Bituminous NON FIBROUS MATERIAL 100%
4	26828136 Layer 1: 6% Asbestos 94% Non-Asbestos	4 wing W S Flashing Tar Paper	Yes	Black, Bituminous, Fibrous CHRYSTILE 6% CELLULOSE FIBER 40%, NON FIBROUS MATERIAL 54%
5	26828137 Layer 1: 100% Non-Asbestos	SW side rotunda Built-up Roofing	No	Black, Bituminous CELLULOSE FIBER 8%, MINERAL/GLASS WOOL 2%, NON FIBROUS MATERIAL 90%

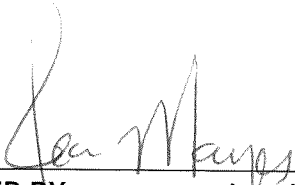
Samples analyzed by the EPA Test Method are subject to the inherent limitations of light microscopy including interference by matrix components. Gravimetric reduction and correlative analyses are recommended for all non-friable, organically bound materials. For calibrated visual estimate, 1% is the concentration at which there is a quantitative uncertainty. This report relates only to the items tested, must not be reproduced except in full with the approval of the lab, and must not be used to claim NVLAP or other government agency endorsement.

Client Sample No.	SLI Sample/ Layer ID	Sample Identification/ Layer Name	Asbestos Detected (Yes/No)	Sample Description
6	26828138 Layer 1: 14% Asbestos 86% Non-Asbestos	SW side rotunda Flashing Tar Paper CHRYSTILE 14% CELLULOSE FIBER 3%, NON FIBROUS MATERIAL 83%	Yes	Black, Bituminous

ANALYST: NAJA ELDANAF

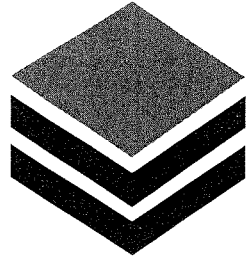
Total no. of pages in report = 2

REVIEWED BY


Jean L. Mayes, Supervisor

Samples analyzed by the EPA Test Method are subject to the inherent limitations of light microscopy including interference by matrix components. Gravimetric reduction and correlative analyses are recommended for all non-friable, organically bound materials. For calibrated visual estimate, 1% is the concentration at which there is a quantitative uncertainty. This report relates only to the items tested, must not be reproduced except in full with the approval of the lab, and must not be used to claim NVLAP or other government agency endorsement.

**ATTACHMENT VI-C
INSPECTOR'S CERTIFICATION**



M·E·T·A

Mayhew Environmental Training Associates

I N C O R P O R A T E D

Certificate # 7ME01227501IR011

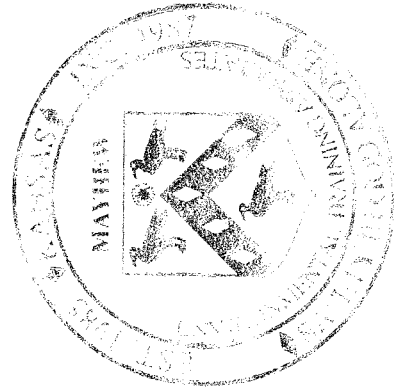
This is to certify that

Lance Tomlin

*has on 01/22/03, in LAWRENCE, KS
completed the requirements for asbestos accreditation under Section 206 of TSCA, Title II, 15 U.S.C. 2646*

AHERA Asbestos Inspector Refresher Training

*as approved by the U.S.E.P.A. under 40 C.F.R. 763 (AHERA)
on 01/22/03 - 01/22/03 and passed the associated examination on 01/22/03
with a score of 70% or better
CM = 0.5 PTS.*



[Signature]
Instructor

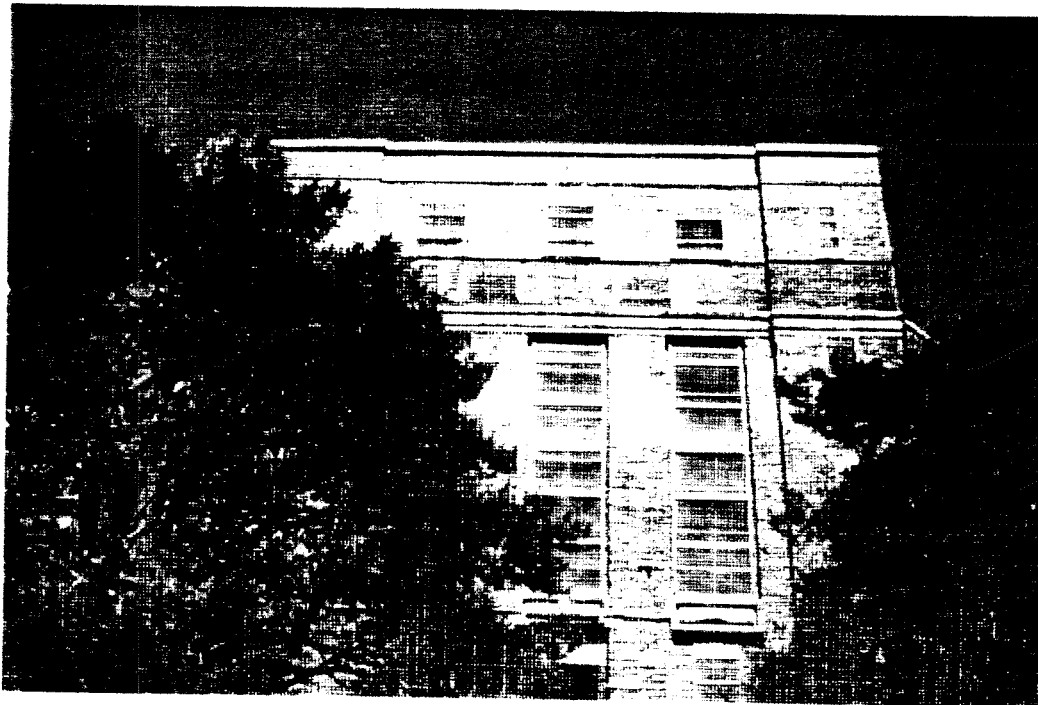
[Signature]
President

Soc. Sec #: 509-70-5228
Accreditation Expires: 01/22/04

META - P.O. Box 786 - Lawrence KS 66044 - 800-444-6382

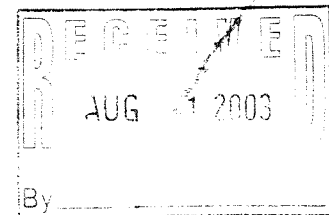
APPENDIX VII
PRE-DEMOLITION PCB AND OTHER HAZARDS SURVEY

PRE-DEMOLITION PCB AND AND OTHER HAZARDS SURVEY



PERFORMED AT:

**USDB CASTLE
BUILDING 475
FT. LEAVENWORTH, KANSAS**



PREPARED FOR:

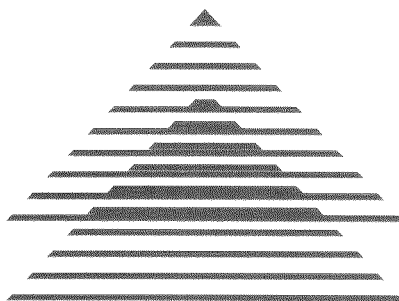
**MR. PHIL PETERSON, P.E.
BIBB AND ASSOCIATES, INC.**

PREPARED BY:

APEX ENVIRONMENTAL CONSULTANTS, INC.
8600 W. 110TH STREET, SUITE 120
OVERLAND PARK, KANSAS 66210
TEL: (913) 338-APEX FAX: (913) 338-2741
WWW.4APEX.COM

**APEX PROJECT NO. 30213E
JULY 29, 2003**

PRE-DEMOLITION PCB AND AND OTHER HAZARDS SURVEY



PERFORMED AT:

**USDB CASTLE
FT. LEAVENWORTH, KANSAS**

PREPARED FOR:

**MR. PHIL PETERSON, P.E.
BIBB AND ASSOCIATES, INC.**

PREPARED BY:

APEX ENVIRONMENTAL CONSULTANTS, INC.
8600 W. 110TH STREET, SUITE 120
OVERLAND PARK, KANSAS 66210
TEL: (913) 338-APEX FAX: (913) 338-2741
WWW.4APEX.COM

APEX PROJECT No. 30213E
JULY 29, 2003

CLIENT:

Mr. Phil Peterson, P.E.
Project Manager
Bibb and Associates, Inc.
8455 Lenexa Drive
Lenexa, KS 66214

Tel: 913-928-7000
Fax: 913-928-7500

PROJECT:

Pre-Demolition PCB and Other Hazards Sampling Report
USDB Castle, Building 475
Fort Leavenworth, Kansas


APEX Project No. 30213E

ENVIRONMENTAL CONSULTANT:


ENVIRONMENTAL CONSULTANT:

APEX ENVIRONMENTAL CONSULTANTS, INC.

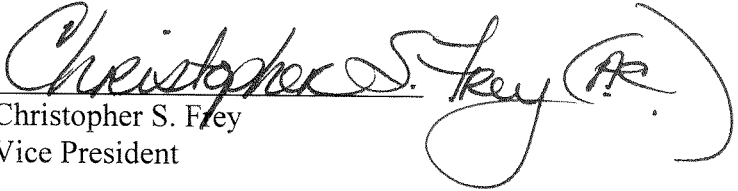
Inspector:


David Nold, M.S.
Industrial Hygienist

Inspector:


Lance Tomlin
Senior Project Manager

Reviewer:


Christopher S. Frey
Vice President

Address: 8600 W. 110th Street, Suite 120
Overland Park, Kansas 66210
Tel: (913) 338-APEX Fax: (913) 338-2741
e-mail: LTomlin@4apex.com

1.0 EXECUTIVE SUMMARY

On June 12, 2003, APEX Environmental Consultants (APEX), Inc. conducted sampling of multiple concrete floors/slabs throughout the USDB facility in an effort to determine the concentration of polychlorinated biphenyls (PCBs) within concrete materials that either currently house, or may have previously housed, electrical transformers. Additionally, surface wipe sampling was conducted in low suspect areas where visible oil contamination was observed on the floor. This sampling effort was being conducted in preparation for building demolition and included the following locations:

- Basement rotunda electrical room (composite concrete dust)
- Sub-basement, 5 wing, electrical cable room (composite concrete dust)
- Sub-basement, 5 wing, electric switch gear room (composite concrete dust)
- Sub-basement, 5 wing, kitchen mechanical room (surface wipe)
- Second sub-basement, 5 wing, northeast storage, elevator equipment room (surface wipe)
- Sub-basement, 5 wing, northwest elevator equipment room (surface wipe)
- Sub-basement, 5 wing, east kitchen addition, elevator equipment room (surface wipe)
- Sub-basement, west kitchen addition, elevator equipment room (surface wipe)

All sampling was conducted by David Nold and Lance Tomlin of APEX, in accordance with 40 CFR Part 761.

The purpose of the sampling was to identify the concentrations of PCB residue in the concrete. Although limited information was available regarding historical locations of electrical transformers and/or other related equipment, three (3) areas of high potential were identified.

In addition to the PCB sampling a general investigation of the building was conducted to identify other environmental hazards.

The following section contains information regarding the methodology used for sampling, results of the sampling, and recommendations.

2.0 SAMPLING METHODOLOGY

Protocol for Composite Concrete Sampling

The following sampling protocol was utilized for composite concrete sampling in the electrical equipment rooms.

1. Because no information was available regarding the existence and/or specific locations of electrical transformers within the USDB, the floors in all identified electrical rooms were sampled. Representative sampling points were selected in each location. A grid system for locating sampling points was not utilized because no transformer mounting pads were identified.
2. A hammer drill, equipped with a 3/4" drill bit, was utilized to bore into the concrete surfaces.
3. Each hole was bored to a depth between one and two inches (1" – 2") at the designated sampling points.
4. Following each boring, the residual dust was collected utilizing a disposable paintbrush and an aluminum pie pan (cut in half). The dust from each sampling point was brushed into a halved pie pan and then transferred immediately into a clean sampling jar.
5. The sampling jar was then sealed and labeled with applicable sampling data.
6. Following completion of sample collection at each sampling point, all samples collected within the sampling location were thoroughly mixed together to form a single composite sample.

7. After collection of all sub-samples within a sampling location, the drill bit was decontaminated with a trisodium phosphate solution recommended by the laboratory. New paintbrushes and pie pans were utilized for each sampling location.
8. The above steps were repeated for subsequent sampling locations.

Protocol for Wipe Sampling

The following sampling protocol was utilized as a screening tool in areas that were considered to have low potential for containing PCB contamination. This type of sampling was conducted in mechanical rooms (e.g. elevator equipment rooms, air compressor rooms) that were not related to electrical service, and was utilized to determine if additional investigative measures were warranted.

1. Hexane pre-moistened sampling media was prepared by DATACHEM laboratories and provided in a clean glass jar.
2. Prior to sampling, a pair of nitrile gloves was donned by the sampling technician.
3. A one square foot disposable sampling template was placed on the floor in a location where visible oils stains were present.
4. The surface was wiped with firm pressure using 3 or more vertical S-strokes (in one direction). The exposed side was then folded inward.
5. Using the once folded media, the same area was then wiped again with S-strokes at right angles to the first wipe. The media was then folded inward.
6. Using the twice-folded media, the same area was then wiped again with S-strokes in the original direction. The media was then folded inward and placed in a clean glass jar for shipment to the laboratory.
7. The sample information was then recorded on the chain-of-custody.

3.0 RESULTS OF SAMPLING

Following the field collection of the samples, each sample was shipped to DATACHEM Laboratories for analysis. The concrete composite samples were analyzed in accordance with 40 CFR Part 761, utilizing the SW-846-8082 analytical method. The wipe samples were analyzed in accordance with NIOSH 5503. These methods test for the seven primary types of PCBs: Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, and Aroclor 1260.

The following is a breakdown of the sample results:

SAMPLE #	LOCATION	RESULT (PPM)	PCB TYPE
03-18431	Basement rotunda electrical room (composite concrete floor dust)	0.06 ppm	Aroclor 1260
03-18432	Sub-basement, 5 wing, electrical cable room (composite concrete floor dust)	24 ppm	Aroclor 1260
03-18433	Sub-basement, 5 wing, electric switch gear room (composite concrete floor dust)	0.10 ppm	Aroclor 1260
03-18434	Sub-basement, 5 wing, kitchen mechanical room (surface wipe)	<10 ppm	All types
03-18435	Second sub-basement, 5 wing, northeast storage, elevator equipment room (surface wipe)	<10 ppm	All types
03-18436	Sub-basement, 5 wing, northwest elevator equipment room (surface wipe)	None Detected	All types
03-18437	Sub-basement, 5 wing, east kitchen addition, elevator equipment room (surface wipe)	None Detected	All types
03-18438	Sub-basement, west kitchen addition, elevator equipment room (surface wipe)	None Detected	All types

The laboratory analytical data sheets are attached in Appendix A.

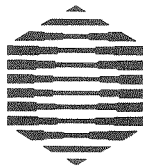
4.0 RECOMMENDATIONS

Defined in 40 CFR 761.3, PCB contaminated means a non-liquid material containing PCB's at concentrations greater than or equal to 50 ppm but less than 500 ppm, or a non-porous surface having a surface concentration greater than 10 ug/100 cm² but less than 100 ug/cm² measured by a standard dust wipe test as defined in 40 CFR 761.123.

In accordance with this definition, none of the concrete floors sampled at the USDB should be considered PCB contaminated. Furthermore, wipe sampling conducted in the other elevator equipment rooms does not indicate evidence of PCB contamination. APEX does not recommend any remediation or additional investigation of potential PCB containing or contaminated equipment (excluding light ballasts) or materials at this time.

The following additional potential environmental hazards were identified in the building: PCB-containing light ballasts, mercury containing fluorescent light tubes and mercury thermometers on water lines, and lead acid batteries in emergency lights. These materials should be located and removed prior to demolition of the building.

**ATTACHMENT VII-A
ANALYTICAL RESULTS**



**DATA
CHEM**
LABORATORIES, INC.

TEST REPORT
Page 1 of 2
6/17/03

Submitted To:
Lance Tomlin
Apex Environmental
8600 W. 110th; Suite 120
Overland Park, KS
66210

Reference Data:	PCB's
Sample Location:	USDB Castle, Building 475
Sample Type:	Concrete Dust
Client Sample No.:	1 through 3
PO #:	Not Available
Method Reference:	EPA 8082
Sample Set ID#:	03-C-2898
DATA CHEM Lab No.:	03-18431 through 03-18433
Sample Receipt Date:	6/13/2003
Preparation Date:	6/16/2003
Analysis Date:	6/16/2003

The samples were prepared for analysis by EPA method 3550B and analyzed using EPA method 8082.

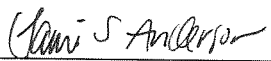
The sample condition upon receipt was acceptable except where noted.

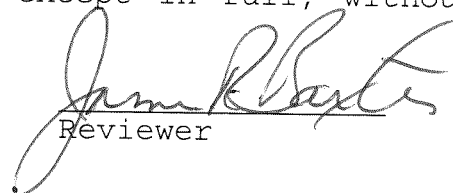
The analysis was performed using a HP 6890 gas chromatograph equipped with an electron capture detector. The analysis was performed on a 30 meter DB-5 fused capillary column with temperature programming from 190°C to 300°.

Compound identification is based upon retention time matching and pattern recognition. Any compound with a similar retention time will interfere.

The results are in the enclosed data table. Results relate only to the items tested and are not blank corrected except when clearly indicated.

This report shall not be reproduced except in full, without the written approval of the laboratory.


Tami S. Anderson
Analyst


Reviewer

CINCINNATI OFFICE
4388 GLENDALE-MILFORD ROAD
CINCINNATI, OHIO 45242-3706
513 733-5336, FAX 513 733-5347

WEST COAST OFFICE
11 SANTA YORMA COURT
NOVATO, CALIFORNIA 94945
800 280-8071, FAX 415 893-9469

DATA TABLE
mg/Kg

Aroclors													
Client #	DCL #	1016	1221	1232	1242	1248	1254	1260	TCMX % Rec	DCBP % Rec			
1	03-18431	ND	ND	ND	ND	ND	ND	.06	91.	83.			
2	03-18432	ND	ND	ND	ND	ND	ND	24.	93.	232.*			
3	03-18433	ND	ND	ND	ND	ND	ND	.10	95.	93.			
	SOIL BLK 6/16	ND	ND	ND	ND	ND	ND	ND	98.	107.			
	SOIL LCS 6/16	ND	ND	ND	ND	ND	ND	.28	100.	109.			
	03-18433 MS	ND	ND	ND	ND	ND	ND	.24	96.	95.			
	03-18433 MSD	ND	ND	ND	ND	ND	ND	.20	96.	95.			
	EQL	.02	.04	.02	.02	.02	.02	.02					

ND indicates not detected at or above the estimated quantitation limit (EQL).

The LCS, MS and MSD are spiked at .33 mg/kg.

* High surrogate recovery due to sample interferences.

Tami S Anderson

Tami S. Anderson
Analyst

James R. Dexters
Reviewer



**DATA
CHEM**
LABORATORIES, INC.

TEST REPORT
Page 1 of 2
6/23/03

Submitted To:

Lance Tomlin
Apex Environmental
8600 W. 110th; Suite 120
Overland Park, KS
66210

Reference Data:

PCB's

Sample Location:	USDB Castle, Building 475
Sample Type:	Wipe
Client Sample No.:	4 through 8
PO #:	Not Available
Method Reference:	NIOSH 5503
Sample Set ID#:	03-C-2898
DATA CHEM Lab No.:	03-18434 through 03-18438
Sample Receipt Date:	6/13/2003
Preparation Date:	6/19/2003
Analysis Date:	6/19/2003

The samples were prepared for analysis by extraction in hexane. Sample condition was acceptable upon receipt except where noted.

The analysis was performed using a Hewlett Packard 5890 gas chromatograph equipped with an electron capture detector and a DB-5 capillary column with temperature programming from 190°C to 300°C. Compound identification is based upon retention time matching and pattern recognition. Any compound with a similar retention time will interfere.

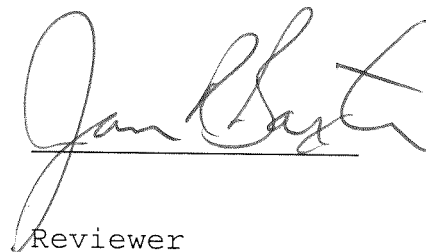
The results are provided in the enclosed data table. Results relate only to the items tested and are not blank corrected.

This report shall not be reproduced except in full, without the written approval of the laboratory.



Tami S. Anderson
Analyst

CINCINNATI OFFICE
4388 GLENDALE-MILFORD ROAD
CINCINNATI, OHIO 45242-3706
513 733-5336, FAX 513 733-5347


Reviewer

WEST COAST OFFICE
11 SANTA YORMA COURT
NOVATO, CALIFORNIA 94945
800 280-8071, FAX 415 893-9469

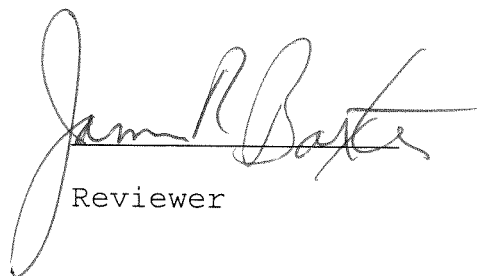
DATA TABLE
µg/Wipe
AROCLORS

Client #	DCL #	1016	1221	1232	1242	1248	1254	1260
4	03-18434	<10.	<10.	<10.	<10.	<10.	<10.	<10.
5	03-18435	<10.	<10.	<10.	<10.	<10.	<10.	<10.
6	03-18436	ND	ND	ND	ND	ND	ND	ND
7	03-18437	ND	ND	ND	ND	ND	ND	ND
8	03-18438	ND	ND	ND	ND	ND	ND	ND
	Limit of Detection	2.	4.	2	2.	2.	2.	2.

ND indicates not detected at or above the limit of detection.



Tami S. Anderson
Analyst



Reviewer

ATTACHMENT VII-B
PHOTO LOG
UPDATED MATERIALS INVENTORY UPDATE

PHOTO LOG

PROJECT NAME: Pre-Demolition PCB Survey

PHOTO DATE: June 12, 2003

PROJECT LOCATION: Fort Leavenworth, USDB Castle, Bldg 475

APEX Proj. No.: 30213E



Photo No. 1

View of basement rotunda electrical room. Composite concrete sample taken from floor around transformer and switchgear.

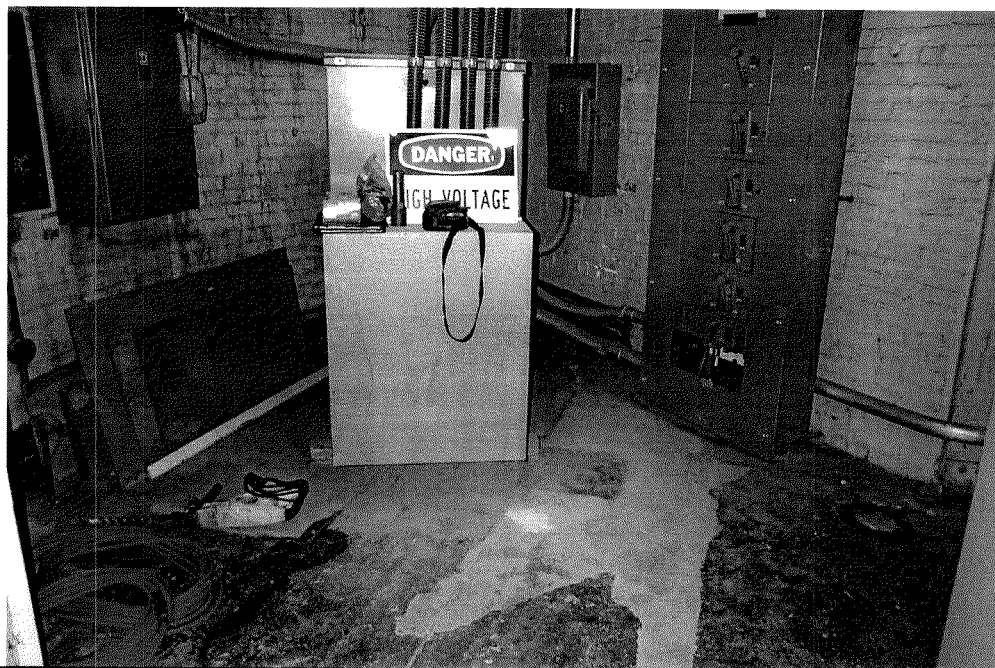


Photo No. 2

View of basement rotunda electrical room. Composite concrete sample taken from floor around transformer and switchgear.

PROJECT NAME: Pre-Demolition PCB Survey
PROJECT LOCATION: Fort Leavenworth, USDB Castle, Bldg 475

PHOTO LOG
PHOTO DATE: June 12, 2003
APEX Proj. No.: 30213E

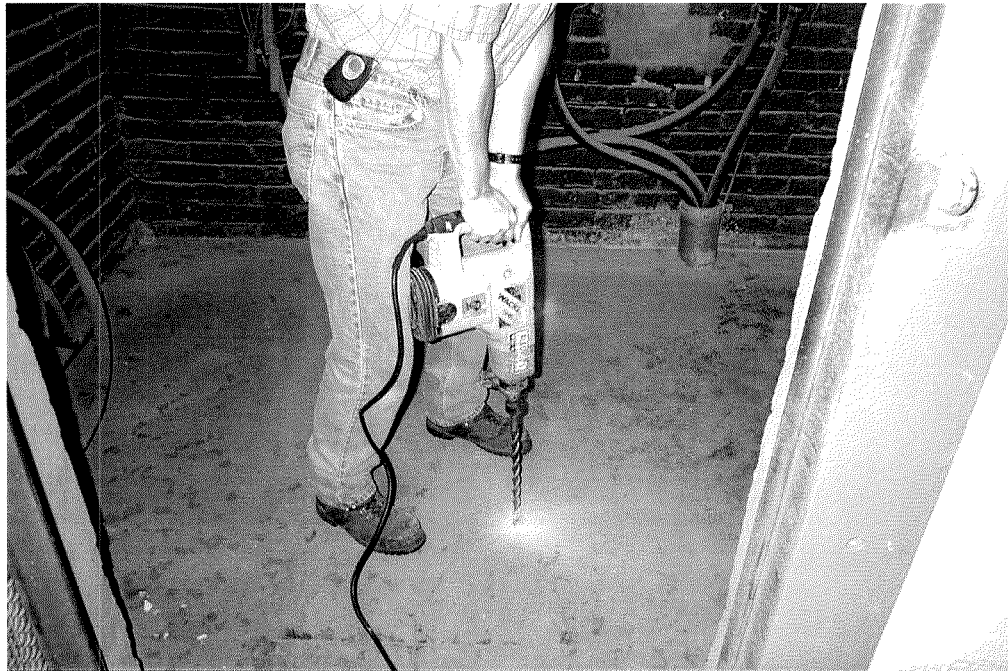


Photo No. 3	View of electrical cable room in 5 th wing of sub basement. Composite concrete sample taken from floor.
--------------------	--



Photo No. 4	View of electrical cable room in 5 th wing of sub basement. Composite concrete sample taken from floor.
--------------------	--

PROJECT NAME: Pre-Demolition PCB Survey
PROJECT LOCATION: Fort Leavenworth, USDB Castle, Bldg 475

PHOTO LOG
PHOTO DATE: June 12, 2003
APEX Proj. No.: 30213E

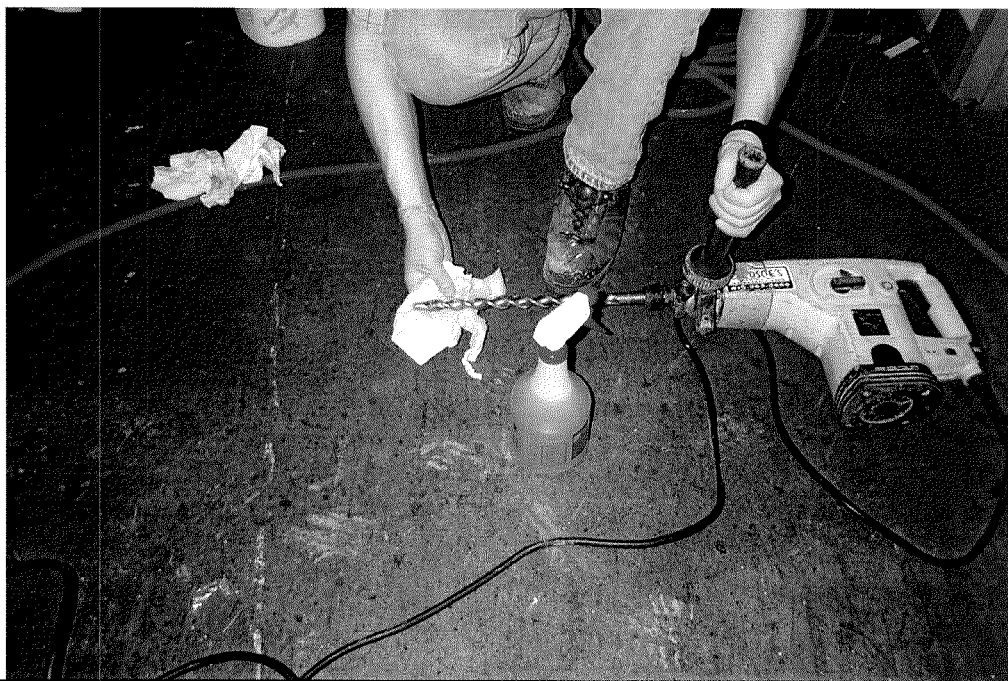


Photo No. 5	Decontaminating hammer drill with TSP solution.
--------------------	---



Photo No. 6	View of electrical switch gear room in north end of tunnel in 5 th wing of sub-basement. Composite concrete sample taken from floor.
--------------------	---

13286N

HANDLING OF LIGHTING BALLASTS AND LAMPS CONTAINING PCBs AND MERCURY
01/01

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.1000	Air Contaminants
40 CFR 260	(1999) Hazardous Waste Management System, General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste
40 CFR 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 268	Land Disposal Restrictions
40 CFR 270	EPA Administered Permit Programs: The Hazardous Waste Program
40 CFR 273	Standards For Universal Waste Management
40 CFR 761	Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions Ref Title
49 CFR 178	Shipping Container Specification

1.2 REQUIREMENTS

Removal and disposal of PCB containing lighting ballasts and associated mercury-containing lamps. Contractor may encounter leaking PCB ballasts.

1.3 DEFINITIONS

1.3.1 Certified Industrial Hygienist (CIH)

A industrial hygienist hired by the contractor shall be certified by the American Board of Industrial Hygiene.

1.3.2 Leak

Leak or leaking means any instance in which a PCB article, PCB container, or PCB equipment has any PCBs on any portion of its external surface.

1.3.3 Lamps

Lamp, also referred to as "universal waste lamp", is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

1.3.4 Polychlorinated Biphenyls (PCBs)

PCBs as used in this specification shall mean the same as PCBs, PCB containing lighting ballast, and PCB container, as defined in 40 CFR 761, Section 3, Definitions.

1.3.5 Spill

Spill means both intentional and unintentional spills, leaks, and other uncontrolled discharges when the release results in any quantity of PCBs running off or about to run off the external surface of the equipment or other PCB source, as well as the contamination resulting from those releases.

1.3.6 Universal Waste

Universal Waste means any of the following hazardous wastes that are managed under the universal waste requirements 40 CFR 273:

- (1) Batteries as described in Sec. 273.2 of this chapter;
- (2) Pesticides as described in Sec. 273.3 of this chapter;
- (3) Thermostats as described in Sec. 273.4 of this chapter; and
- (4) Lamps as described in Sec. 273.5 of this chapter.

1.4 QUALITY ASSURANCE

1.4.1 Regulatory Requirements

Perform PCB related work in accordance with 40 CFR 761. Perform mercury-containing lamps storage and transport in accordance with 40 CFR 261, 40 CFR 264, 40 CFR 265, 40 CFR 273.

1.4.2 Training

Certified industrial hygienist (CIH) shall instruct and certify the training of all persons involved in the removal of PCB containing lighting ballasts and mercury-containing lamps. The instruction shall include: The dangers of PCB and mercury exposure, decontamination, safe work practices, and applicable OSHA and EPA regulations. The CIH shall review and approve the PCB and Mercury-Containing Lamp Removal Work Plans.

1.4.3 Regulation Documents

Maintain at all times one copy each at the office and one copy each in view at the job site of 29 CFR 1910.1000, 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 265, 40 CFR 268, 40 CFR 270, 40 CFR 273 and of the Contractor removal work plan and disposal plan for PCB and for associated mercury-containing lamps.

1.5 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-07 Certificates

Qualifications of CIH; G, RE.

Training Certification; G, RE.

PCB and Lamp Removal Work Plan; G, RE.

SD-11 Closeout Submittals

Certification of Decontamination

Certificate of Disposal and/or Recycling.

Submit to the Government before application for payment within 30 days of the date that the disposal of the PCB and mercury- containing lamp waste identified on the manifest was completed.

1.6 ENVIRONMENTAL REQUIREMENTS

Use special clothing:

- a. Disposable gloves (polyethylene)
- b. Eye protection
- c. PPE as required by CIH

1.7 SCHEDULING

Notify the Contracting Officer 20 days prior to the start of PCB and mercury-containing lamp removal work.

1.8 QUALITY ASSURANCE

1.8.1 Qualifications of CIH

Submit the name, address, and telephone number of the Industrial Hygienist selected to perform the duties in paragraph entitled "Certified Industrial Hygienist." Submit training certification that the Industrial Hygienist is certified, including certification number and date of certification or re certification.

1.8.2 PCB and Lamp Removal Work Plan

Submit a job-specific plan within 30 calendar days after award of contract of the work procedures to be used in the removal, packaging, and storage of PCB-containing lighting ballasts and associated mercury-containing lamps. Include in the plan: Requirements for Personal Protective Equipment (PPE), spill cleanup procedures and equipment, eating, smoking and restroom procedures. The plan shall be approved and signed by the Certified Industrial Hygienist. Obtain approval of the plan by the Contracting Officer prior to the start of PCB and/or lamp removal work.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 WORK PROCEDURE

Furnish labor, materials, services, and equipment necessary for the removal of PCB containing lighting ballasts, associated mercury-containing fluorescent lamps, and high intensity discharge (HID) lamps in accordance with local, state,

or federal regulations. Do not expose PCBs to open flames or other high temperature sources since toxic decomposition by-products may be produced. Do not break mercury containing fluorescent lamps or high intensity discharge lamps.

3.1.1 Work Operations

Ensure that work operations or processes involving PCB or PCB-contaminated materials are conducted in accordance with 40 CFR 761, 40 CFR 262 40 CFR 263, and the applicable requirements of this section, including but not limited to:

- a. Obtaining suitable PCB and mercury-containing lamp storage sites.
- b. Notifying Contracting Officer prior to commencing the operation.
- c. Reporting leaks and spills to the Contracting Officer.
- d. Cleaning up spills.
- e. Inspecting PCB and PCB-contaminated items and waste containers for leaks and forwarding copies of inspection reports to the Contracting Officer.
- f. Maintaining inspection, inventory and spill records.

3.2 PCB SPILL CLEANUP REQUIREMENTS

3.2.1 PCB Spills

Immediately report to the Contracting Officer any PCB spills.

3.2.2 PCB Spill Control Area

Rope off an area around the edges of a PCB leak or spill and post a "PCB Spill Authorized Personnel Only" caution sign. Immediately transfer leaking items to a drip pan or other container.

3.2.3 PCB Spill Cleanup

40 CFR 761, subpart G. Initiate cleanup of spills as soon as possible, but no later than 24 hours of its discovery. Mop up the liquid with rags or other conventional absorbent. The spent absorbent shall be properly contained and disposed of as solid PCB waste.

3.2.4 Records and Certification

Document the cleanup with records of decontamination in accordance with 40 CFR 761, Section 125, Requirements for PCB Spill Cleanup. Provide test results of cleanup and certification of decontamination.

3.3 REMOVAL

3.3.1 Ballasts

As ballast are removed from the lighting fixture, inspect label on ballast. Ballasts without a "No PCB" label shall be assumed to contain PCBs and containerized and disposed of as required under paragraphs STORAGE FOR DISPOSAL and DISPOSAL. If there are less than 1600 "No PCB" labeled lighting ballasts dispose of them as normal demolition debris. Lighting ballasts labeled "No "PCB" maybe given to DCA Recycle Center to be placed in metal yard. Ballasts shall be placed in a metal drum. Each drum shall have a proper sitting lid.

3.3.2 Lighting Lamps

Remove lighting tubes/lamps from the lighting fixture and carefully place

(unbroken) into appropriate containers (original transport boxes or equivalent). In the event of a lighting tube/lamp braking, sweep and place waste in double plastic taped bags and dispose of as hazardous waste as specified herein. Unbroken tubes/lamps maybe properly disposed as universal waster.

3.4 STORAGE FOR DISPOSAL

3.4.1 Storage Containers for PCBs

49 CFR 178. Store PCB in containers approved by DOT for PCB.

3.4.2 Storage Containers for lamps

Store mercury containing lamps in appropriate DOT containers. The boxes shall be stored and labeled for transport in accordance with 40 CFR 273.

3.4.3 Labeling of Waste Containers

Label with the following:

- a. Date the item was placed in storage and the name of the cognizant activity/building.
- b. "Caution Contains PCB," conforming to 40 CFR 761, CFR Subpart C. Affix labels to PCB waste containers.
- c. Label mercury-containing lamp waste in accordance with 40 CFR 273. Affix labels to all lighting waste containers.

3.5 DISPOSAL

Dispose of off Government property in accordance with EPA, DOT, and local regulations at a permitted site. Contractor shall store mercury containing lamps as Universal Waste, but shall properly ship mercury containing lamps as hazardous waste if transporting mercury containing lamps across state lines. The Contractor shall affix the proper hazardous waste labels to each container of mercury containing lamps prior to shipment. The Contractor can request through the Contracting Office and receive the required labels through the DIS Environmental Division. The Contractor shall inform DIS Environmental Division, through the Contracting Officer, the date and time of all planned shipments. DIS Environmental Division shall inspect all containers for shipment of mercury containing lamps and all manifesting papers three days prior to shipment.

3.5.1 Identification Number

Federal regulations 40 CFR 761, and 40 CFR 263 require that generators, transporters, commercial storers, and disposers of PCB waste posses U.S. EPA identification numbers. The Post has an EPA ID number. All manifesting goes through DIS Environmental Division office for approval and signatures prior to leaving Post.

3.5.2 Disposal by the Government

Comply with disposal and transportation requirements outlined in 40 CFR 761 and 40 CFR 263. Load and haul PCBs to the storage site at the work site.

3.5.2.1 Government Pick Up

Contractor delivers Non-PCB labeled ballasts to Recycling Center in drums or otherwise properly disposes of Non-PCB ballasts. Contractor delivers PCB-labeled ballasts to Hazardous waste Storage facility, Bldg 499, in approved DOT 55-gallon open top steel drums. DIS Environmental shall prepare all necessary forms for proper disposal. The Contractor shall submit a certificate of disposal and/or

recycling when disposal is complete.

-- End of Section --

DIVISION 14 - CONVEYING SYSTEMS

THRU

DIVISION 15 - MECHANICAL

NOT APPLICABLE

DIVISION 16 - ELECTRICAL

16375A

Electrical Distribution System, Underground

SECTION 16375A

ELECTRICAL DISTRIBUTION SYSTEM, UNDERGROUND
02/02

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI C119.1	(1986; R 1997) Sealed Insulated Underground Connector Systems Rated 600 Volts
ANSI C57.12.26	(1993) Pad-Mounted Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers for Use with Separable Insulated High-Voltage Connectors, High-Voltage, 34 500 Grd Y/19 920 Volts and Below; 2500 kVA and Smaller
ANSI C80.1	(1995) Rigid Steel Conduit - Zinc Coated
ANSI O5.1	(1992) Specifications and Dimensions for Wood Poles

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 123/A 123M	(2001) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 153/A 153M	(2001) Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A 48	(1994a1) Gray Iron Castings
ASTM B 117	(1997) Operating Salt Spray (Fog) Apparatus
ASTM B 3	(1995) Soft or Annealed Copper Wire
ASTM B 496	(1999) Compact Round Concentric-Lay-Stranded Copper Conductors
ASTM B 8	(1999) Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft
ASTM C 478	(1997) Precast Reinforced Concrete Manhole Sections
ASTM C 478M	(1997) Precast Reinforced Concrete Manhole Sections (Metric)
ASTM D 1654	(1992) Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments
ASTM D 4059	(1996) Analysis of Polychlorinated Biphenyls in Insulating Liquids by Gas Chromatography

ASTM D 923 (1997) Sampling Electrical Insulating Liquids

ASSOCIATION OF EDISON ILLUMINATING COMPANIES (AEIC)

AEIC CS6 (1996) Ethylene Propylene Rubber Insulated
Shielded Power Cables Rated 5 Through 69 kV

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE C2 (1997) National Electrical Safety Code

IEEE C57.12.00 (2000) Liquid-Immersed Distribution, Power, and
Regulating Transformers (IEEE)

IEEE C57.98 (1993) Guide for Transformer Impulse Tests
\\$avail only as part of Distribution, Power, and
Regulating Transformers Stds Collection

IEEE Std 100 (1997) IEEE Standard Dictionary of Electrical
and Electronics Terms

IEEE Std 386 (1995) Separable Insulated Connector Systems for
Power Distribution Systems Above 600V

IEEE Std 404 (1993) Cable Joints for Use with Extruded
Dielectric Cable Rated 5000 V Through 138 000 V
and Cable Joints for Use with Laminated
Dielectric Cable Rated 2500 V Through 500 000 V

IEEE Std 48 (1998) Standard Test Procedures and Requirements
for Alternating-Current Cable Terminations 2.5
kV through 765 kV

IEEE Std 592 (1990; R 1996) Exposed Semiconducting Shields on
Premolded High Voltage Cable Joints and
Separable Insulated Connectors

IEEE Std 81 (1983) Guide for Measuring Earth Resistivity,
Ground Impedance, and Earth Surface Potentials
of a Ground System (Part 1) \\$31.00\\$F

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA FB 1 (1993) Fittings, Cast Metal Boxes, and Conduit
Bodies for Conduit and Cable Assemblies

NEMA TC 6 (1990) PVC and ABS Plastic Utilities Duct for
Underground Installation

NEMA WC 8 (1988; Rev 3 1996)
Ethylene-Propylene-Rubber-Insulated Wire and
Cable for the Transmission and Distribution of
Electrical Energy

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (2002) National Electrical Code

UNDERWRITERS LABORATORIES (UL)

UL 1072 (1995; Rev Mar 1998) Medium Voltage Power Cables

UL 1242	(1996; Rev Mar 1998) Intermediate Metal Conduit
UL 467	(1993; Rev thru Apr 1999) Grounding and Bonding Equipment
UL 486A	(1997; Rev thru Dec 1998) Wire Connectors and Soldering Lugs for Use with Copper Conductors
UL 486B	(1997; Rev Jun 1997) Wire Connectors for Use with Aluminum Conductors
UL 514A	(1996; Rev Dec 1999) Metallic Outlet Boxes
UL 6	(1997) Rigid Metal Conduit
UL 651	(1995; Rev thru Oct 1998) Schedule 40 and 80 Rigid PVC Conduit

1.2 GENERAL REQUIREMENTS

1.2.1 Terminology

Terminology used in this specification is as defined in IEEE Std 100.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Electrical Distribution System; G, RE.

Detail drawings consisting of equipment drawings, illustrations, schedules, instructions, diagrams manufacturers standard installation drawings and other information necessary to define the installation and enable the Government to check conformity with the requirements of the contract drawings.

If departures from the contract drawings are deemed necessary by the Contractor, complete details of such departures shall be included with the detail drawings. Approved departures shall be made at no additional cost to the Government.

Detail drawings shall show how components are assembled, function together and how they will be installed on the project. Data and drawings for component parts of an item or system shall be coordinated and submitted as a unit. Data and drawings shall be coordinated and included in a single submission. Multiple submissions for the same equipment or system are not acceptable except where prior approval has been obtained from the Contracting Officer. In such cases, a list of data to be submitted later shall be included with the first submission. Detail drawings shall consist of the following:

a. Detail drawings showing physical arrangement, construction details, connections, finishes, materials used in fabrication, provisions for conduit entrance, access requirements for installation and maintenance, physical size, electrical characteristics, foundation and support details, and equipment weight. Drawings shall be drawn to scale and/or

dimensioned. All optional items shall be clearly identified as included or excluded.

b. Internal wiring diagrams of equipment showing wiring as actually provided for this project. External wiring connections shall be clearly identified.

Detail drawings shall as a minimum depict the installation of the following items:

- a. Medium-voltage cables
- b. Medium-voltage cables terminations
- c. Pad-mounted transformers
- d. Surge arresters
- e. Conduit PVC and RGS

As-Built Drawings; G, RE.

The as-built drawings shall be a record of the construction as installed. The drawings shall include the information shown on the contract drawings as well as deviations, modifications, and changes from the contract drawings, however minor. The as-built drawings shall be a full sized set of prints marked to reflect deviations, modifications, and changes. The as-built drawings shall be complete and show the location, size, dimensions, part identification, and other information. Additional sheets may be added. The as-built drawings shall be jointly inspected for accuracy and completeness by the Contractor's quality control representative and by the Contracting Officer prior to the submission of each monthly pay estimate. Upon completion of the work, the Contractor shall provide three full sized sets of the marked prints to the Contracting Officer for approval. If upon review, the as-built drawings are found to contain errors and/or omissions, they will be returned to the Contractor for correction. The Contractor shall correct and return the as-built drawings to the Contracting Officer for approval within 10 calendar days from the time the drawings are returned to the Contractor.

SD-03 Product Data

Nameplates; G, RE.

Catalog cuts, brochures, circulars, specifications, product data, and printed information in sufficient detail and scope to verify compliance with the requirements of the contract documents.

Material and Equipment; G, RE.

A complete itemized listing of equipment and materials proposed for incorporation into the work. Each entry shall include an item number, the quantity of items proposed, and the name of the manufacturer of each such item.

General Installation Requirements; G, RE.

As a minimum, installation procedures for transformers, medium-voltage cable terminations and splices.

Procedures shall include cable pulling plans, diagrams, instructions, and precautions required to install, adjust, calibrate, and test the

devices and equipment.

SD-06 Test Reports

Factory Tests; G, RE.

Certified factory test reports shall be submitted when the manufacturer performs routine factory tests, including tests required by standards listed in paragraph REFERENCES. Results of factory tests performed shall be certified by the manufacturer, or an approved testing laboratory, and submitted within 7 days following successful completion of the tests. The manufacturer's pass-fail criteria for tests specified in paragraph FIELD TESTING shall be included.

Field Testing; G, RE.

A proposed field test plan, 20 days prior to testing the installed system. No field test shall be performed until the test plan is approved. The test plan shall consist of complete field test procedures including tests to be performed, test equipment required, and tolerance limits.

Operating Tests; G, RE.

Six copies of the information described below in 8-1/2 by 11 inch binders having a minimum of three rings, including a separate section for each test. Sections shall be separated by heavy plastic dividers with tabs.

- a. A list of equipment used, with calibration certifications.
- b. A copy of measurements taken.
- c. The dates of testing.
- d. The equipment and values to be verified.
- e. The condition specified for the test.
- f. The test results, signed and dated.
- g. A description of adjustments made.

Cable Installation; G, RE.

Six copies of the information described below in 8-1/2 by 11 inch binders having a minimum of three rings from which material may readily be removed and replaced, including a separate section for each cable pull. Sections shall be separated by heavy plastic dividers with tabs, with all data sheets signed and dated by the person supervising the pull.

- a. Site layout drawing with cable pulls numerically identified.
- b. A list of equipment used, with calibration certifications. The manufacturer and quantity of lubricant used on pull.
- c. The cable manufacturer and type of cable.
- d. The dates of cable pulls, time of day, and ambient temperature.
- e. The length of cable pull and calculated cable pulling tensions.
- f. The actual cable pulling tensions encountered during pull.

SD-07 Certificates

Material and Equipment; G, RE.

Where materials or equipment are specified to conform to the standards of the Underwriters Laboratories (UL) or to be constructed or tested, or both, in accordance with the standards of the American National Standards Institute (ANSI), the Institute of Electrical and Electronics Engineers (IEEE), or the National Electrical Manufacturers Association (NEMA), the Contractor shall submit proof that the items provided conform to such requirements. The label of, or listing by, UL will be acceptable as evidence that the items conform. Either a certification or a published catalog specification data statement, to the effect that the item is in accordance with the referenced ANSI or IEEE standard, will be acceptable as evidence that the item conforms. A similar certification or published catalog specification data statement to the effect that the item is in accordance with the referenced NEMA standard, by a company listed as a member company of NEMA, will be acceptable as evidence that the item conforms. In lieu of such certification or published data, the Contractor may submit a certificate from a recognized testing agency equipped and competent to perform such services, stating that the items have been tested and that they conform to the requirements listed, including methods of testing of the specified agencies. Compliance with above-named requirements does not relieve the Contractor from compliance with any other requirements of the specifications.

Cable Joints; G, RE.

A certification that contains the names and the qualifications of people recommended to perform the splicing and termination of medium-voltage cables approved for installation under this contract. The certification shall indicate that any person recommended to perform actual splicing and terminations has been adequately trained in the proper techniques and have had at least three recent years of experience in splicing and terminating the same or similar types of cables approved for installation. In addition, any person recommended by the Contractor may be required to perform a practice splice and termination, in the presence of the Contracting Officer, before being approved as a qualified installer of medium-voltage cables. If that additional requirement is imposed, the Contractor shall provide short sections of the approved types of cables along with the approved type of splice and termination kits, and detailed manufacturer's instruction for the proper splicing and termination of the approved cable types.

Cable Installer Qualifications; G, RE.

The Contractor shall provide at least one onsite person in a supervisory position with a documentable level of competency and experience to supervise all cable pulling operations. A resume shall be provided showing the cable installers' experience in the last three years, including a list of references complete with points of contact, addresses and telephone numbers.

SD-10 Operation and Maintenance Data

Electrical Distribution System; G, RE.

Six copies of operation and maintenance manuals, within 7 calendar days following the completion of tests and including assembly, installation, operation and maintenance instructions, spare parts data which provides supplier name, current cost, catalog order number, and a recommended list of spare parts to be stocked. Manuals shall also

include data outlining detailed procedures for system startup and operation, and a troubleshooting guide which lists possible operational problems and corrective action to be taken. A brief description of all equipment, basic operating features, and routine maintenance requirements shall also be included. Documents shall be bound in a binder marked or identified on the spine and front cover. A table of contents page shall be included and marked with pertinent contract information and contents of the manual. Tabs shall be provided to separate different types of documents, such as catalog ordering information, drawings, instructions, and spare parts data. Index sheets shall be provided for each section of the manual when warranted by the quantity of documents included under separate tabs or dividers.

Three additional copies of the instructions manual shall be provided within 30 calendar days following the manuals.

1.4 DELIVERY, STORAGE, AND HANDLING

Devices and equipment shall be visually inspected by the Contractor when received and prior to acceptance from conveyance. Stored items shall be protected from the environment in accordance with the manufacturer's published instructions. Damaged items shall be replaced. Oil filled transformers and switches shall be stored in accordance with the manufacturer's requirements. Wood poles held in storage for more than 2 weeks shall be stored in accordance with ANSI O5.1. Handling of wood poles shall be in accordance with ANSI O5.1, except that pointed tools capable of producing indentations more than 1 inch in depth shall not be used. Metal poles shall be handled and stored in accordance with the manufacturer's instructions.

1.5 EXTRA MATERIALS

One additional spare fuse or fuse element for each furnished fuse or fuse element shall be delivered to the contracting officer when the electrical system is accepted. Two complete sets of all special tools required for maintenance shall be provided, complete with a suitable tool box. Special tools are those that only the manufacturer provides, for special purposes (to access compartments, or operate, adjust, or maintain special parts).

PART 2 PRODUCTS

2.1 STANDARD PRODUCT

Material and equipment shall be the standard product of a manufacturer regularly engaged in the manufacture of the product and shall essentially duplicate items that have been in satisfactory use for at least 2 years prior to bid opening. Items of the same classification shall be identical including equipment, assemblies, parts, and components.

2.2 NAMEPLATES

2.2.1 General

Each major component of this specification shall have the manufacturer's name, address, type or style, model or serial number, and catalog number on a nameplate securely attached to the equipment. Nameplates shall be made of noncorrosive metal. Equipment containing liquid dielectrics shall have the type of dielectric on the nameplate.

2.2.2 Liquid-Filled Transformer Nameplates

Power transformers shall be provided with nameplate information in accordance with IEEE C57.12.00. Nameplates shall indicate the number of gallons and composition of liquid-dielectric, and shall be permanently marked with a

statement that the transformer dielectric to be supplied is non-polychlorinated biphenyl. If transformer nameplate is not so marked, the Contractor shall furnish manufacturer's certification for each transformer that the dielectric is non-PCB classified, with less than 2 ppm PCB content in accordance with paragraph LIQUID DIELECTRICS. Certifications shall be related to serial numbers on transformer nameplates. Transformer dielectric exceeding the 2 ppm PCB content or transformers without certification will be considered as PCB insulated and will not be accepted.

2.3 CORROSION PROTECTION

2.3.1 Aluminum Materials

Aluminum shall not be used in contact with earth or concrete. Where aluminum conductors are connected to dissimilar metal, fittings conforming to UL 486B shall be used.

2.3.2 Ferrous Metal Materials

2.3.2.1 Hardware

Ferrous metal hardware shall be hot-dip galvanized in accordance with ASTM A 153/A 153M and ASTM A 123/A 123M.

2.3.2.2 Equipment

Equipment and component items, including but not limited to transformer stations and ferrous metal luminaries not hot-dip galvanized or porcelain enamel finished, shall be provided with corrosion-resistant finishes which shall withstand 120 hours of exposure to the salt spray test specified in ASTM B 117 without loss of paint or release of adhesion of the paint primer coat to the metal surface in excess of 1/16 inch from the test mark. The scribed test mark and test evaluation shall be in accordance with ASTM D 1654 with a rating of not less than 7 in accordance with TABLE 1, (procedure A). Cut edges or otherwise damaged surfaces of hot-dip galvanized sheet steel or mill galvanized sheet steel shall be coated with a zinc rich paint conforming to the manufacturer's standard.

2.4 CABLES

Cables shall be single conductor type unless otherwise indicated.

2.4.1 Medium-Voltage Cables

2.4.1.1 General

Cable construction shall be Type MV, conforming to NFPA 70 and UL 1072. Cables shall be manufactured for use in duct applications.

2.4.1.2 Ratings

Cables shall be rated for a circuit voltage of 15 kV.

2.4.1.3 Conductor Material

Underground cables shall be soft drawn copper complying with ASTM B 3 and ASTM B 8 for regular concentric and compressed stranding or ASTM B 496 for compact stranding.

2.4.1.4 Insulation

Cable insulation shall be ethylene-propylene-rubber (EPR) insulation conforming to the requirements of NEMA WC 8 and AEIC CS6. A 133 percent insulation level shall be used on 15 kV rated cables.

2.4.1.5 Shielding

Cables rated for 2 kV and above shall have a semiconducting conductor shield, a semiconducting insulation shield, and an overall copper tape or screen wire shield for each phase. The shield shall be sized to meet IEEE C2 requirements for a ground fault current.

2.4.1.6 Neutrals

Neutral conductors shall be copper employing the same insulation and jacket materials as phase conductors, except that a 600-volt insulation rating is acceptable.

2.4.1.7 Jackets

Cables shall be provided with a PVC or polyethylene jacket.

2.4.2 Low-Voltage Cables

Cables shall be rated 600 volts and shall conform to the requirements of NFPA 70, and must be UL listed for the application or meet the applicable section of either ICEA or NEMA standards.

2.4.2.1 Conductor Material

Underground cables shall be annealed copper complying with ASTM B 3 and ASTM B 8. Intermixing of copper and aluminum conductors is not permitted.

2.4.2.2 Insulation

Insulation must be in accordance with NFPA 70, and must be UL listed for the application or meet the applicable sections of either ICEA, or NEMA standards.

2.4.2.3 Jackets

Single conductor cables shall have an overall PVC or polyethylene outer jacket.

2.4.2.4 In Duct

Cables shall be single-conductor cable, in accordance with NFPA 70.

2.5 CABLE JOINTS, TERMINATIONS, AND CONNECTORS

2.5.1 Medium-Voltage Cable Joints

Medium-voltage cable joints shall comply with IEEE Std 404 and IEEE Std 592. Medium-voltage cable terminations shall comply with IEEE Std 48. Joints shall be the standard products of a manufacturer and shall be either of the factory preformed type or of the kit type containing tapes and other required parts. Joints shall have ratings not less than the ratings of the cables on which they are installed. Splice kits shall be of the heat-shrinkable type for voltages up to 15 kV. Joints used in manholes, handholes, vaults and pull boxes shall be certified by the manufacturer for waterproof, submersible applications.

2.5.2 Medium-Voltage Separable Insulated Connectors

Separable insulated connectors shall comply with IEEE Std 386 and IEEE Std 592 and shall be of suitable construction or standard splice kits shall be used. Connectors shall be of the loadbreak type as indicated, of suitable construction for the application and the type of cable connected, and shall include cable shield adaptors. Separable insulated connectors shall not be used as substitutes for conventional permanent splices. External clamping points and test points

shall be provided.

2.5.3 Low-Voltage Cable Splices

Low-voltage cable splices and terminations shall be rated at not less than 600 Volts. Splices in conductors No. 10 AWG and smaller shall be made with an insulated, solderless, pressure type connector, conforming to the applicable requirements of UL 486A. Splices in conductors No. 8 AWG and larger shall be made with noninsulated, solderless, pressure type connector, conforming to the applicable requirements of UL 486A and UL 486B. Splices shall then be covered with an insulation and jacket material equivalent to the conductor insulation and jacket. Splices below grade or in wet locations shall be sealed type conforming to ANSI C119.1 or shall be waterproofed by a sealant-filled, thick wall, heat shrinkable, thermosetting tubing or by pouring a thermosetting resin into a mold that surrounds the joined conductors.

2.5.4 Terminations

Terminations shall be in accordance with IEEE Std 48, Class 1 or Class 2; of the molded elastomer, wet-process porcelain, prestretched elastomer, heat-shrinkable elastomer, or taped type. Acceptable elastomers are track-resistant silicone rubber or track-resistant ethylene propylene compounds, such as ethylene propylene rubber or ethylene propylene diene monomer. Separable insulated connectors may be used for apparatus terminations, when such apparatus is provided with suitable bushings. Terminations shall be of the outdoor type, except that where installed inside outdoor equipment housings which are sealed against normal infiltration of moisture and outside air, indoor, Class 2 terminations are acceptable. Class 3 terminations are not acceptable. Terminations, where required, shall be provided with mounting brackets suitable for the intended installation and with grounding provisions for the cable shielding.

2.5.4.1 Factory Preformed Type

Molded elastomer, wet-process porcelain, prestretched, and heat-shrinkable terminations shall utilize factory preformed components to the maximum extent practicable rather than tape build-up. Terminations shall have basic impulse levels as required for the system voltage level.

2.5.4.2 Taped Terminations

Taped terminations shall use standard termination kits providing terminal connectors, field-fabricated stress cones, and rain hoods. Terminations shall be at least 35 inches long from the end of the tapered cable jacket to the start of the terminal connector, or not less than the kit manufacturer's recommendations, whichever is greater.

2.6 CONDUIT AND DUCTS

Ducts shall be single, round-bore type, with wall thickness and fittings suitable for the application. Duct lines shall be concrete-encased, thin-wall type.

2.6.1 Metallic Conduit

Intermediate metal conduit shall comply with UL 1242. Rigid galvanized steel conduit shall comply with UL 6 and ANSI C80.1. Metallic conduit fittings and outlets shall comply with UL 514A and NEMA FB 1.

2.6.2 Nonmetallic Ducts

2.6.2.1 Concrete Encased Ducts

UL 651 Schedule 40 or NEMA TC 6 Type EB.

2.6.3 Conduit Sealing Compound

Compounds for sealing ducts and conduit shall have a putty-like consistency workable with the hands at temperatures as low as 35 degrees F, shall neither slump at a temperature of 300 degrees F, nor harden materially when exposed to the air. Compounds shall adhere to clean surfaces of fiber or plastic ducts; metallic conduits or conduit coatings; concrete, masonry, or lead; any cable sheaths, jackets, covers, or insulation materials; and the common metals. Compounds shall form a seal without dissolving, noticeably changing characteristics, or removing any of the ingredients. Compounds shall have no injurious effect upon the hands of workmen or upon materials.

2.7 MANHOLES, HANDHOLES, AND PULLBOXES

Manholes, handholes, and pullboxes shall be as indicated. Strength of manholes, handholes, and pullboxes and their frames and covers shall conform to the requirements of IEEE C2. Precast-concrete manholes shall have the required strength established by ASTM C 478, ASTM C 478M. Frames and covers shall be made of gray cast iron and a machine-finished seat shall be provided to ensure a matching joint between frame and cover. Cast iron shall comply with ASTM A 48, Class 30B, minimum. Handholes for low voltage cables installed in parking lots, sidewalks, and turfed areas shall be fabricated from an aggregate consisting of sand and with continuous woven glass strands having an overall compressive strength of at least 10,000 psi and a flexural strength of at least 5,000 psi. Pullbox and handhole covers in sidewalks, and turfed areas shall be of the same material as the box. Concrete pullboxes shall consist of precast reinforced concrete boxes, extensions, bases, and covers.

2.8 TRANSFORMERS

Transformers shall be of the outdoor type having the ratings and arrangements indicated. Medium-voltage ratings of cable terminations shall be 15 kV between phases for 133 percent insulation level.

2.8.1 Pad-Mounted Transformers

Pad-mounted transformers shall comply with ANSI C57.12.26 and shall be of the radial type. Pad-mounted transformer stations shall be assembled and coordinated by one manufacturer and each transformer station shall be shipped as a complete unit so that field installation requirements are limited to mounting each unit on a concrete pad and connecting it to primary and secondary lines. Stainless steel pins and hinges shall be provided. Barriers shall be provided between high- and low-voltage compartments. High-voltage compartment doors shall be interlocked with low-voltage compartment doors to prevent access to any high-voltage section unless its associated low-voltage section door has first been opened. Compartments shall be sized to meet the specific dimensional requirements of ANSI C57.12.26. Pentahead locking bolts shall be provided with provisions for a padlock.

2.8.1.1 High-Voltage Compartments

The high-voltage compartment shall be dead-front construction. Primary switching and protective devices shall include loadbreak switching, medium-voltage separable loadbreak connectors, universal bushing wells and inserts or integral one piece bushings and surge arresters. The switch shall be mounted inside transformer tank with switch operating handle located in high-voltage and equipped with metal loop for hook stick operation. Adjacent to medium-voltage cable connections, a nameplate or equivalent stenciled inscription shall be provided inscribed "DO NOT OPEN CABLE CONNECTORS UNLESS SWITCH IS OPEN." Surge arresters shall be fully insulated and configured to terminate on a second set of high voltage bushings.

2.8.1.2 Load-Break Switch

Radial-feed oil-immersed type rated at 15 kV, 95 kV BIL, with a continuous current rating and load-break rating of 200 ampere, and a make-and-latch rating of 10,000 rms amperes symmetrical. Locate the switch handle in the high-voltage compartment.

2.8.1.3 Transformer Tank Sections

Transformers shall comply with IEEE C57.12.00 and ANSI C57.12.26 and shall be of the mineral oil-insulated type liquid. Transformers shall be suitable for outdoor use and shall have 2 separate windings per phase. Standard NEMA primary taps shall be provided. Where primary taps are not specified, 4, 2-1/2 percent rated kVA high-voltage taps shall be provided 2 above and 2 below rated primary voltage. Operating handles for primary tap changers for de-energized operation shall be located within high-voltage compartments, externally to transformer tanks. Adjacent to the tap changer operating handle, a nameplate or equivalent stenciled inscription shall be provided and inscribed "DO NOT OPERATE UNDER LOAD." Transformer ratings at 60 Hz shall be as follows:

Three-phase capacity.....750 kVA.
 Impedance.....5.75 percent.
 Temperature Rise.....65 degrees C
 High-voltage winding.....12,470 volts.
 High-voltage winding connection.....DELTA
 Low-voltage winding.....120/208
 Low-voltage winding connections.....WYE

2.8.1.4 Low-Voltage Cable Compartments

Neutrals shall be provided with fully-insulated bushings. Clamp type cable terminations, suitable for copper conductors entering from below, shall be provided as necessary.

2.8.1.5 Accessories

High-voltage warning signs shall be permanently attached to each side of transformer stations. Voltage warning signs shall comply with IEEE C2. Copper-faced steel or stainless steel ground connection pads shall be provided in both the high- and low-voltage compartments. Dial-type thermometer, liquid-level gauge, and drain valve with built-in sampling device shall be provided for each transformer stations. Insulated-bushing-type parking stands shall be provided adjacent to each separable load-break elbow to provide for cable isolation during sectionalizing operations.

2.9 GROUNDING AND BONDING

2.9.1 Driven Ground Rods

Ground rods shall be copper-clad steel conforming to UL 467 not less than 3/4 inch in diameter by 10 feet in length. Sectional type rods shall not be used.

2.9.2 Grounding Conductors

Grounding conductors shall be bare, except where installed in conduit with associated phase conductors. Insulated conductors shall be of the same material as phase conductors and green color-coded, except that conductors shall be rated

no more than 600 volts. Bare conductors shall be ASTM B 8 soft-drawn unless otherwise indicated. Aluminum is not acceptable.

2.10 CONCRETE AND REINFORCEMENT

Concrete work shall have minimum 3000 psi compressive strength and conform to the requirements of Section 03300 CAST-IN-PLACE STRUCTURAL CONCRETE. Concrete reinforcing shall be as specified in Section 03200A CONCRETE REINFORCEMENT.

2.11 PADLOCKS

Coordinate padlock requirements with the Contracting Officer.

2.12 LIQUID DIELECTRICS

Liquid dielectrics for transformers, capacitors, reclosers, and other liquid-filled electrical equipment shall be non-polychlorinated biphenyl (PCB) mineral-oil as specified. Nonflammable fluids shall not be used. Tetrachloroethylene (perchloroethylene) and 1, 2, 4 trichlorobenzene fluids shall not be used. Liquid dielectrics in retrofitted equipment shall be certified by the manufacturer as having less than 2 parts per million (ppm) PCB content. In lieu of the manufacturer's certification, the Contractor may submit a test sample of the dielectric in accordance with ASTM D 923 and have tests performed per ASTM D 4059 at a testing facility approved by the Contracting Officer. Equipment with test results indicated PCB level exceeding 2 ppm shall be replaced.

2.13 FACTORY TESTS

Factory tests shall be performed, as follows, in accordance with the applicable publications and with other requirements of these specifications. The Contracting Officer shall be notified at least 10 days before the equipment is ready for testing. The Contracting Officer reserves the right to witness the tests.

a. Transformers: Manufacturer's standard tests in accordance with IEEE C57.12.00.

b. Transformers rated 200 kVA and above: Reduced full-wave, chopped-wave, and full-wave impulse test on each line and neutral terminal, in accordance with IEEE C57.98.

c. Factory Preformed Terminations: Wet withstand voltage tests in accordance with IEEE Std 48 for the next height BIL level.

PART 3 EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

Equipment and devices shall be installed and energized in accordance with the manufacturer's published instructions. Circuits installed aerially shall conform to the requirements of Section 16370A ELECTRICAL DISTRIBUTION SYSTEM, AERIAL. Except as covered herein, excavation, trenching, and backfilling shall conform to the requirements of Section 02316A EXCAVATION, TRENCHING, AND BACKFILLING FOR UTILITIES SYSTEMS. Concrete work shall have minimum 3000 psi compressive strength and conform to the requirements of Section 03300 CAST-IN-PLACE STRUCTURAL CONCRETE.

3.1.1 Conformance to Codes

The installation shall comply with the requirements and recommendations of NFPA 70 and IEEE C2 as applicable.

3.1.2 Verification of Dimensions

The Contractor shall become familiar with details of the work, shall verify dimensions in the field, and shall advise the Contracting Officer of any discrepancy before performing any work.

3.1.3 Disposal of Liquid Dielectrics

PCB-contaminated dielectrics must be marked as PCB and transported to and incinerated by an approved EPA waste disposal facility. The Contractor shall furnish certification of proper disposal. Contaminated dielectrics shall not be diluted to lower the contamination level.

3.2 CABLE INSTALLATION

The Contractor shall obtain from the manufacturer an installation manual or set of instructions which addresses such aspects as cable construction, insulation type, cable diameter, bending radius, cable temperature, lubricants, coefficient of friction, conduit cleaning, storage procedures, moisture seals, testing for and purging moisture, etc. The Contractor shall then prepare a checklist of significant requirements, perform pulling calculations and prepare a pulling plan which shall be submitted along with the manufacturers instructions in accordance with SUBMITTALS.

3.2.1 Cable Installation Plan and Procedure

Cable shall be installed strictly in accordance with the cable manufacturer's recommendations. Each circuit shall be identified by means of a fiber, laminated plastic, or non-ferrous metal tags, or approved equal, in each manhole, handhole, junction box, and each terminal. Each tag shall contain the following information; cable type, conductor size, circuit number, circuit voltage, cable destination and phase identification.

3.2.1.1 Cable Inspection

The cable reel shall be inspected for correct storage positions, signs of physical damage, and broken end seals. If end seal is broken, moisture shall be removed from cable in accordance with the cable manufacturer's recommendations.

3.2.1.2 Duct Cleaning

Duct shall be cleaned with an assembly that consists of a flexible mandrel (manufacturers standard product in lengths recommended for the specific size and type of duct) that is 1/4 inch less than inside diameter of duct, 2 wire brushes, and a rag. The cleaning assembly shall be pulled through conduit a minimum of 2 times or until less than a volume of 8 cubic inches of debris is expelled from the duct.

3.2.1.3 Duct Lubrication

The cable lubricant shall be compatible with the cable jacket for cable that is being installed. Application of lubricant shall be in accordance with lubricant manufacturer's recommendations.

3.2.1.4 Cable Installation

The Contractor shall provide a cable feeding truck and a cable pulling winch as required. The Contractor shall provide a pulling grip or pulling eye in accordance with cable manufacturer's recommendations. The pulling grip or pulling eye apparatus shall be attached to polypropylene or manila rope followed by lubricant front end packs and then by power cables. A dynamometer shall be used to monitor pulling tension. Pulling tension shall not exceed cable manufacturer's recommendations. The Contractor shall not allow cables to cross over while cables are being fed into duct. For cable installation in cold

weather, cables shall be kept at 50 degrees F temperature for at least 24 hours before installation.

3.2.1.5 Cable Installation Plan

The Contractor shall submit a cable installation plan for all cable pulls in accordance with the detail drawings portion of paragraph SUBMITTALS. Cable installation plan shall include:

- a. Site layout drawing with cable pulls identified in numeric order of expected pulling sequence and direction of cable pull.
- b. List of cable installation equipment.
- c. Lubricant manufacturer's application instructions.
- d. Procedure for resealing cable ends to prevent moisture from entering cable.
- e. Cable pulling tension calculations of all cable pulls.
- f. Cable percentage conduit fill.
- g. Cable sidewall thrust pressure.
- h. Cable minimum bend radius and minimum diameter of pulling wheels used.
- i. Cable jam ratio.
- j. Maximum allowable pulling tension on each different type and size of conductor.
- k. Maximum allowable pulling tension on pulling device.

3.2.2 Duct Line

Cables shall be installed in duct lines where indicated. Cable splices in low-voltage cables shall be made in manholes and handholes only, except as otherwise noted. Cable joints in medium-voltage cables shall be made in manholes or approved pullboxes only. Neutral and grounding conductors shall be installed in the same duct with their associated phase conductors.

3.2.3 Trenching

Trenches for ducts, shall be excavated to depths required to provide the minimum necessary cover. Bottoms of trenches shall be smooth and free of stones and sharp objects. Where bottoms of trenches comprise materials other than sand, a 3 inch layer of sand shall be laid first and compacted to approximate densities of surrounding firm soil.

3.2.4 Electric Manholes

Cables shall be routed around the interior walls and securely supported from walls on cables racks. Cable routing shall minimize cable crossover, provide access space for maintenance and installation of additional cables, and maintain cable separation in accordance with IEEE C2.

3.3 CABLE JOINTS

Medium-voltage cable joints shall be made by qualified cable splicers only. Cable Installer Qualifications of splicers shall be submitted in accordance with paragraph SUBMITTALS. Shields shall be applied as required to continue the shielding system through each entire cable joint. Shields may be integrally

molded parts of preformed joints. Shields shall be grounded at each joint or in accordance with manufacturer's recommended practice. Cable joints shall provide insulation and jacket equivalent to that of the associated cable.

3.4 DUCT LINES

3.4.1 Requirements

Numbers and sizes of ducts shall be as indicated. Duct lines shall be laid with a minimum slope of 4 inches per 100 feet. Depending on the contour of the finished grade, the high-point may be at a terminal, a manhole, a handhole, or between manholes or handholes. Short-radius rigid galvanized steel manufactured 90-degree duct bends may be used only for pole or equipment risers, unless specifically indicated as acceptable. The minimum manufactured bend radius shall be 18 inches for ducts of less than 3 inch diameter, and 36 inches for ducts 3 inches or greater in diameter. Otherwise, long sweep bends having a minimum radius of 25 feet shall be used for a change of direction of more than 5 degrees, either horizontally or vertically. Both curved and straight sections may be used to form long sweep bends, but the maximum curve used shall be 30 degrees and manufactured bends shall be used. Ducts shall be provided with end bells whenever duct lines terminate in manholes or handholes.

3.4.2 Treatment

Ducts shall be kept clean of concrete, dirt, or foreign substances during construction. Field cuts requiring tapers shall be made with proper tools and match factory tapers. A coupling recommended by the duct manufacturer shall be used whenever an existing duct is connected to a duct of different material or shape. Ducts shall be stored to avoid warping and deterioration with ends sufficiently plugged to prevent entry of any water or solid substances. Ducts shall be thoroughly cleaned before being laid. Plastic ducts shall be stored on a flat surface and protected from the direct rays of the sun.

3.4.3 Concrete Encasement

Ducts requiring concrete encasements shall comply with NFPA 70, except that electrical duct bank configurations for ducts 6 inches in diameter shall be determined by calculation and as shown on the drawings. The separation between adjacent electric power and communication ducts shall conform to IEEE C2. Duct line encasements shall be monolithic construction. Where a connection is made to a previously poured encasement, the new encasement shall be well bonded or doweled to the existing encasement. The Contractor shall submit proposed bonding method for approval in accordance with the detail drawing portion of paragraph SUBMITTALS. At any point tops of concrete encasements shall be not less than the cover requirements listed in NFPA 70. Where ducts are jacked under existing pavement, rigid steel conduit will be installed because of its strength. To protect the corrosion-resistant conduit coating, predrilling or installing conduit inside a larger iron pipe sleeve (jack-and-sleeve) is required. For crossings of existing railroads and airfield pavements greater than 50 feet in length, the predrilling method or the jack-and-sleeve method will be used. Separators or spacing blocks shall be made of steel, concrete, plastic, or a combination of these materials placed not farther apart than 4 feet on centers. Ducts shall be securely anchored to prevent movement during the placement of concrete and joints shall be staggered at least 6 inches vertically.

3.4.4 Installation of Couplings

Joints in each type of duct shall be made up in accordance with the manufacturer's recommendations for the particular type of duct and coupling selected and as approved.

3.4.4.1 Plastic Duct

Duct joints shall be made by brushing a plastic solvent cement on insides of plastic coupling fittings and on outsides of duct ends. Each duct and fitting shall then be slipped together with a quick 1/4-turn twist to set the joint tightly.

3.4.5 Duct Line Markers

Duct line markers shall be provided at the ends of long duct line stubouts or for other ducts whose locations are indeterminate because of duct curvature or terminations at completely below-grade structures. In addition to markers, a 5 mil brightly colored plastic tape, not less than 3 inches in width and suitably inscribed at not more than 10 feet on centers with a continuous metallic backing and a corrosion-resistant 1 mil metallic foil core to permit easy location of the duct line, shall be placed approximately 12 inches below finished grade levels of such lines.

3.5 PAD-MOUNTED EQUIPMENT INSTALLATION

Pad-mounted equipment, shall be installed on concrete pads in accordance with the manufacturer's published, standard installation drawings and procedures, except that they shall be modified to meet the requirements of this document. Units shall be installed so that they do not damage equipment or scratch painted or coated surfaces. After installation, surfaces shall be inspected and scratches touched up with a paint or coating provided by the manufacturer especially for this purpose. Three-phase transformers shall be installed with phase sequence to match existing. Primary taps shall be set in the field.

3.5.1 Concrete Pads

3.5.1.1 Construction

Concrete pads for pad-mounted electrical equipment shall be poured-in-place. Pads shall be constructed as indicated, except that exact pad dimensions and mounting details are equipment specific and are the responsibility of the Contractor. Tops of concrete pads shall be level and shall project 4 inches above finished grade and sloped to drain. Edges of concrete pads shall have 3/4 inch chamfer. Conduits for primary, secondary, and grounding conductors shall be set in place prior to placement of concrete pads. Where grounding electrode conductors are installed through concrete pads, PVC conduit sleeves shall be installed through the concrete to provide physical protection. To facilitate cable installation and termination, the concrete pad shall be provided with a rectangular hole below the primary and secondary compartments, sized in accordance with the manufacturer's recommended dimensions. Upon completion of equipment installation the rectangular hole shall be filled with masonry grout.

3.5.1.2 Concrete and Reinforcement

Concrete work shall have minimum 3000 psi compressive strength and conform to the requirements of Section 03300 CAST-IN-PALACE STRUCTURAL CONCRETE. Concrete pad reinforcement shall be in accordance with Section 03200A CONCRETE REINFORCEMENT.

3.5.1.3 Sealing

When the installation is complete, the Contractor shall seal all conduit and other entries into the equipment enclosure with an approved sealing compound. Seals shall be of sufficient strength and durability to protect all energized live parts of the equipment from rodents, insects, or other foreign matter.

3.5.2 Padlocks

Padlocks shall be provided for pad-mounted equipment. Padlocks shall be as directed by the Contracting Officer.

3.6 GROUNDING

A ground consisting of the indicated configuration of bare copper conductors and driven ground rods shall be installed at equipment as shown. Equipment frames of metal-enclosed equipment, and other noncurrent-carrying metal parts, such as cable shields, and metallic conduit shall be grounded. Metallic frames and covers of handholes and pull boxes shall be grounded by use of a braided, copper ground strap with equivalent ampacity of No. 6 AWG.

3.6.1 Grounding Electrodes

Grounding electrodes shall be installed as shown on the drawings and as follows:

- a. Driven rod electrodes - Unless otherwise indicated, ground rods shall be driven into the earth until the tops of the rods are approximately 1 foot below finished grade.
- d. Additional electrodes - When the required ground resistance is not met, additional electrodes shall be provided interconnected with grounding conductors to achieve the specified ground resistance. The additional electrodes will be up to three, 10 foot rods spaced a minimum of 12 feet apart and 3/4 inch diameter driven perpendicular to grade. In high ground resistance, UL listed chemically charged ground rods may be used. If the resultant resistance exceeds 25 ohms measured not less than 48 hours after rainfall, the Contracting Officer shall be notified immediately.

3.6.2 Grounding and Bonding Connections

Connections above grade shall be made by the fusion-welding process or with bolted solderless connectors, in compliance with UL 467, and those below grade shall be made by a fusion-welding process. Where grounding conductors are connected to aluminum-composition conductors, specially treated or lined copper-to-aluminum connectors suitable for this purpose shall be used.

3.6.3 Grounding and Bonding Conductors

Grounding and bonding conductors include conductors used to bond transformer enclosures and equipment frames to the grounding electrode system. Grounding and bonding conductors shall be sized as shown, and located to provide maximum physical protection. Bends greater than 45 degrees in ground conductors are not permitted. Routing of ground conductors through concrete shall be avoided. When concrete penetration is necessary, nonmetallic conduit shall be cast flush with the points of concrete entrance and exit so as to provide an opening for the ground conductor, and the opening shall be sealed with a suitable compound after installation.

3.6.4 Surge Arrester Grounding

Surge arresters and neutrals shall be bonded directly to the transformer enclosure and then to the grounding electrode system with a bare copper conductor, sized as shown. Lead lengths shall be kept as short as practicable with no kinks or sharp bends.

3.6.5 Manhole, Handhole, or Concrete Pullbox Grounding

Ground rods installed in manholes, handholes, or concrete pullboxes shall be connected to cable racks, cable-pulling irons, the cable shielding, metallic sheath, and armor at each cable joint or splice by means of a No. 4 AWG braided tinned copper wire. Connections to metallic cable sheaths shall be by means of tinned terminals soldered to ground wires and to cable sheaths. Care shall be taken in soldering not to damage metallic cable sheaths or shields. Ground rods shall be protected with a double wrapping of pressure-sensitive plastic tape for

a distance of 2 inches above and 6 inches below concrete penetrations. Grounding electrode conductors shall be neatly and firmly attached to manhole or handhole walls and the amount of exposed bare wire shall be held to a minimum.

3.7 FIELD TESTING

3.7.1 General

Field testing shall be performed in the presence of the Contracting Officer. The Contractor shall notify the Contracting Officer 10 days prior to conducting tests. The Contractor shall furnish all materials, labor, and equipment necessary to conduct field tests. The Contractor shall perform all tests and inspections recommended by the manufacturer unless specifically waived by the Contracting Officer. The Contractor shall maintain a written record of all tests which includes date, test performed, personnel involved, devices tested, serial number and name of test equipment, and test results. Field test reports shall be signed and dated by the Contractor.

3.7.2 Safety

The Contractor shall provide and use safety devices such as rubber gloves, protective barriers, and danger signs to protect and warn personnel in the test vicinity. The Contractor shall replace any devices or equipment which are damaged due to improper test procedures or handling.

3.7.3 Ground-Resistance Tests

The resistance of each grounding electrode shall be measured using the fall-of-potential method defined in IEEE Std 81. Ground resistance measurements shall be made before the electrical distribution system is energized and shall be made in normally dry conditions not less than 48 hours after the last rainfall. Resistance measurements of separate grounding electrode systems shall be made before the systems are bonded together below grade. The combined resistance of separate systems may be used to meet the required resistance, but the specified number of electrodes must still be provided.

- a. Single rod electrode - 25 ohms.
- b. Multiple rod electrodes - 5 ohms.

3.7.4 Ground-Mat Connection Inspection

All below-grade ground connections will be visually inspected by the Contracting Officer before backfilling. The Contractor shall notify the Contracting Officer 24 hours before the site is ready for inspection.

3.7.5 Medium-Voltage Cable Test

After installation and before the operating test or connection to an existing system, the medium-voltage cable system shall be given a high potential test. Direct-current voltage shall be applied on each phase conductor of the system by connecting conductors as one terminal and connecting grounds or metallic shieldings or sheaths of the cable as the other terminal for each test. Prior to making the test, the cables shall be isolated by opening applicable protective devices and disconnecting equipment. The test shall be conducted with all splices, connectors, and terminations in place. The method, voltage, length of time, and other characteristics of the test for initial installation shall be in accordance with NEMA WC 8 for the particular type of cable installed, and shall not exceed the recommendations of IEEE Std 404 for cable joints and IEEE Std 48 for cable terminations unless the cable and accessory manufacturers indicate higher voltages are acceptable for testing. Should any cable fail due to a weakness of conductor insulation or due to defects or injuries incidental to the installation or because of improper installation of cable, cable joints,

terminations, or other connections, the Contractor shall make necessary repairs or replace cables as directed. Repaired or replaced cables shall be retested. All repair or replacement shall be at no additional cost to the government.

3.7.6 Low-Voltage Cable Test

Low-voltage cable, complete with splices, shall be tested for insulation resistance after the cables are installed, in their final configuration, ready for connection to the equipment, and prior to energization. The test voltage shall be 500 volts dc, applied for one minute between each conductor and ground and between all possible combinations conductors in the same trench, duct, or cable, with all other conductors in the same trench, duct, or conduit. The minimum value of insulation shall be:

$R \text{ in megohms} = (\text{rated voltage in kV} + 1) \times 1000 / (\text{length of cable in feet})$

Each cable failing this test shall be repaired or replaced. The repaired cable shall be retested until failures have been eliminated.

3.7.7 Liquid-Filled Transformer Tests

The following field tests shall be performed on all liquid-filled transformers. Pass-fail criteria shall be in accordance with transformer manufacturer's specifications.

- a. Insulation resistance test phase-to-ground.
- b. Turns ratio test.
- c. Correct phase sequence.
- d. Correct operation of tap changer.

3.7.8 Operating Tests

After the installation is completed, and at such times as the Contracting Officer may direct, the Contractor shall conduct operating tests for approval. The equipment shall be demonstrated to operate in accordance with the requirements herein. An operating test report shall be submitted in accordance with paragraph SUBMITTALS.

3.8 ACCEPTANCE

Final acceptance of the facility will not be given until the Contractor has successfully completed all tests and after all defects in installation, material or operation have been corrected.

-- End of Section --